Modern PACKAGING

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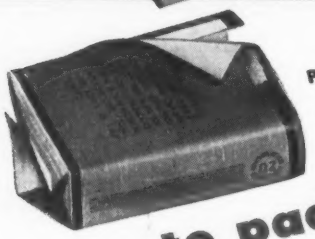
SEE COVER STORY PAGE 97

OCTOBER 1947

TEN ADHESIVES

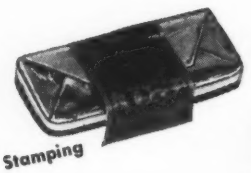


Package Cupping

to package the cigarette

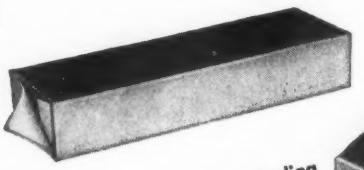
Cellophane Sealing

Foil Laminating

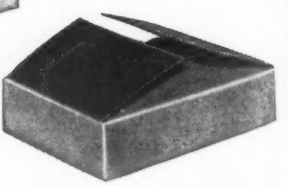


Revenue Stamping

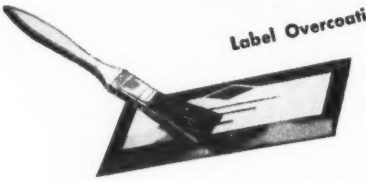
Carton Forming and Sealing



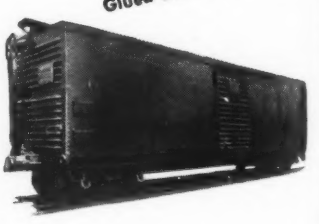
Case Sealing



Label Overcoating



Glued-unit carloading



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DETROIT

extra point

HERE ARE two little words that loom big and important these crisp Saturday afternoons—as any 7-6, 14-13, or 21-20 football score will tell you. The traditional snake dance . . . a band boasting sonorously of success . . . jubilant old grads hold forth on one side of the field. Dead silence . . . horns muted in despair . . . dejected rooters sorrow on the other side. Two little words give us the two-sided story of victory and defeat: *extra point.*

On shelves and counters of retail shops a hard-fought struggle between glass packaged products rages every day . . . including football afternoons. It's your product against the field, with victory or defeat wrapped up with every consumer's purchase.

A few products win acceptance easily and decisively. Many more take the victor's laurel only after the consumer has carefully examined the package from bottom to top.

Which, we submit, is right and proper. For if the *top* of the package is the Phoenix C T Cap, that package can be readily classified as convenient. And a convenient package is an *extra point* that may well be the difference between a winning and losing product.

PHOENIX METAL CAP CO.

2444 W. Sixteenth St., Chicago 8 3720 Fourteenth Ave., Brooklyn 18

Modern PACKAGING

VOLUME 21

NUMBER 2

OCTOBER 1947

GENERAL

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With designers' resources once more unlimited, noteworthy special-occasion packs are appearing in many product lines.

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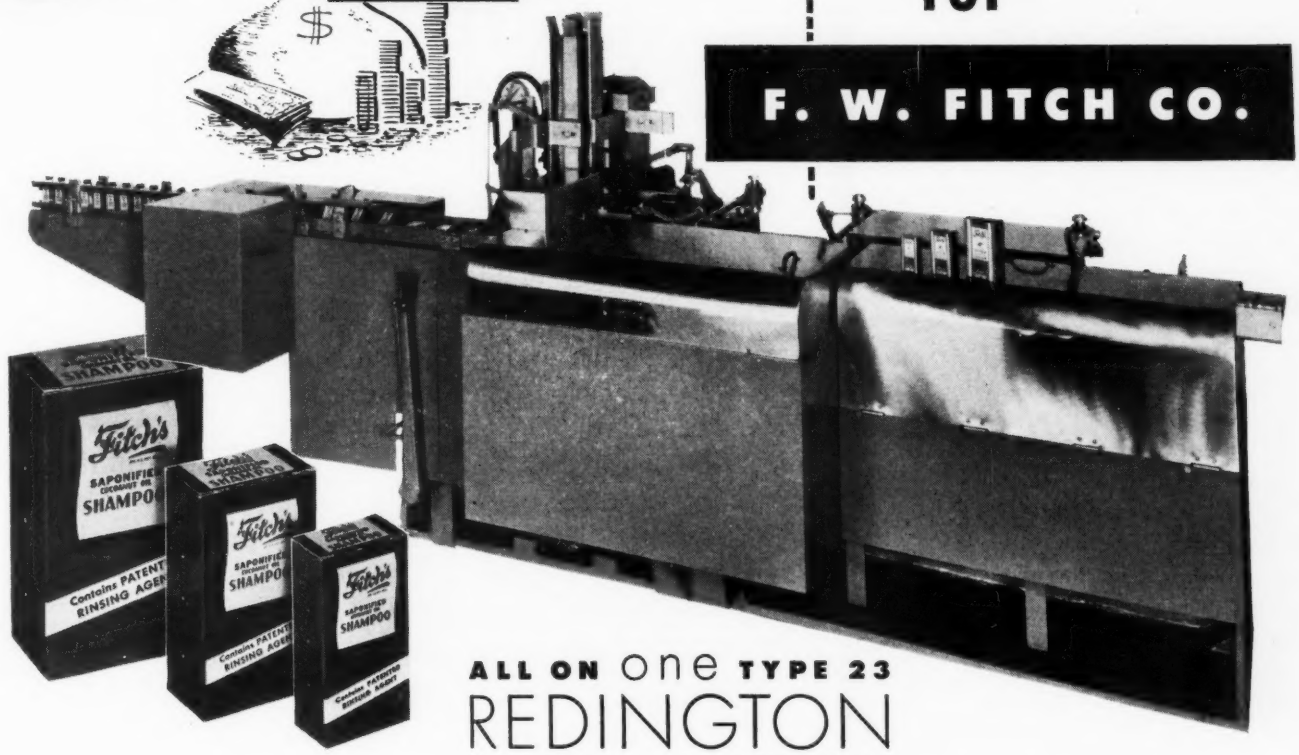
time: **REDUCED**

cost: **REDUCED**

PRODUCTION: increased

for

F. W. FITCH CO.



ALL ON one TYPE 23

REDINGTON

High Speed Continuous Loading Cartoning Machine

The first Redington Machine built for the F. W. Fitch Co. of Des Moines, Iowa, was in 1938. They now have seven Redington machines producing their many outstanding products. Pictured above is the latest addition of the simple adjustable cartoning machine now being used to carton the one, 2⅝ and 6 ounce bottles of Fitch's "Skin Pep" After Shaving Lotion, and Fitch's Coconut Oil Shampoo at a speed of 120 per minute. A number of other Fitch products are cartoned on this machine.

The operation is simple: Bottles after they have been capped and labeled, are fed directly onto the intake and are then gently transferred from intake belt into pockets of intake conveyor standing upright. They are gently lowered through guides into horizontal position. Collapsed carton is fed from machine, formed, and bottle is inserted into carton. Carton is then closed by tucking in end flaps. Tuck-in portion of bottom flap is spot glued.

It's a simple matter to change over from one size package to another. The machine is ready for processing new sizes by simply moving numbered parts to proper markings.

This Type 23 High Speed Cartoning Machine is equipped with the usual Redington features; including continuous loading mechanism, turned and ground shafting, self-aligning roller bearings and skip cartoning eliminating any possibility of shipping empty cartons.

Now, as in the past fifty years, production experts still say, "If it's packaging, try Redington first."

F. B. REDINGTON CO. (Est. 1897) 110-112 S. SANGAMON ST., CHICAGO 7, ILL.

1897 REDINGTON 1947

FIFTIETH YEAR

AUTOMATIC CARTONING • WRAPPING • SPECIAL PACKAGING

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GOODBY, SELLERS' MARKET

DON'T LOOK NOW, but that shortage of boxboard and container board that has been haunting us for, it seems, years and years is about to disappear.

This is a victory won, not through any lessening of demand, but by all-out production and expansion of paper-mill facilities.

With 24-hour-a-day, seven-day-a-week schedules, production of paper and paperboard has been steadily inched upward until it stands now at the unheard-of level of 21,000,000 tons a year. By the end of 1948 additional production from new plants and new machines will add 3,000,000 more tons to annual capacity. At that point capacity will be exactly double the normal prewar output of 12,000,000 tons a year.

Although this may come as a surprise to box buyers still working on a limited quota basis, the U. S. Dept. of Commerce reports that some box makers are showing signs of jitters about keeping their expanded capacity occupied. They are beginning to realize that once again they will have to do a real and continuous job of selling and develop new business potentials.

Already, with the first evidence that supply of shipping containers in some sections is slightly in excess of demand, the "gray market" in container board (which for a few drunken months last winter was quoting—and getting—double the established $95-a-ton price) has collapsed completely.

This is a return to sanity. Nobody—with the possible exception of the gray market operator—really regrets the passing of the sellers' market. Aggressive merchandising by the package suppliers has been instrumental in the growth of packaging to its present stature and there is absolutely no reason to think that this process is going to stop now.

The Editors

Member of Audit Bureau of Circulations

Only the FINEST cartoner can give you the LOWEST cartoning cost

Jones Cartoners, by giving long, uninterrupted runs at high speeds, have proven their ability to do a superior job of cost-saving cartoning.

Jones Cartoners compensate for normal carton variations.

Overload releases prevent damage from oversize or defective cartons and loads.

From infeed to discharge, there is no dependence on delicate gauging or timing.

As a result, Jones Cartoners reduce down time to the vanishing point.

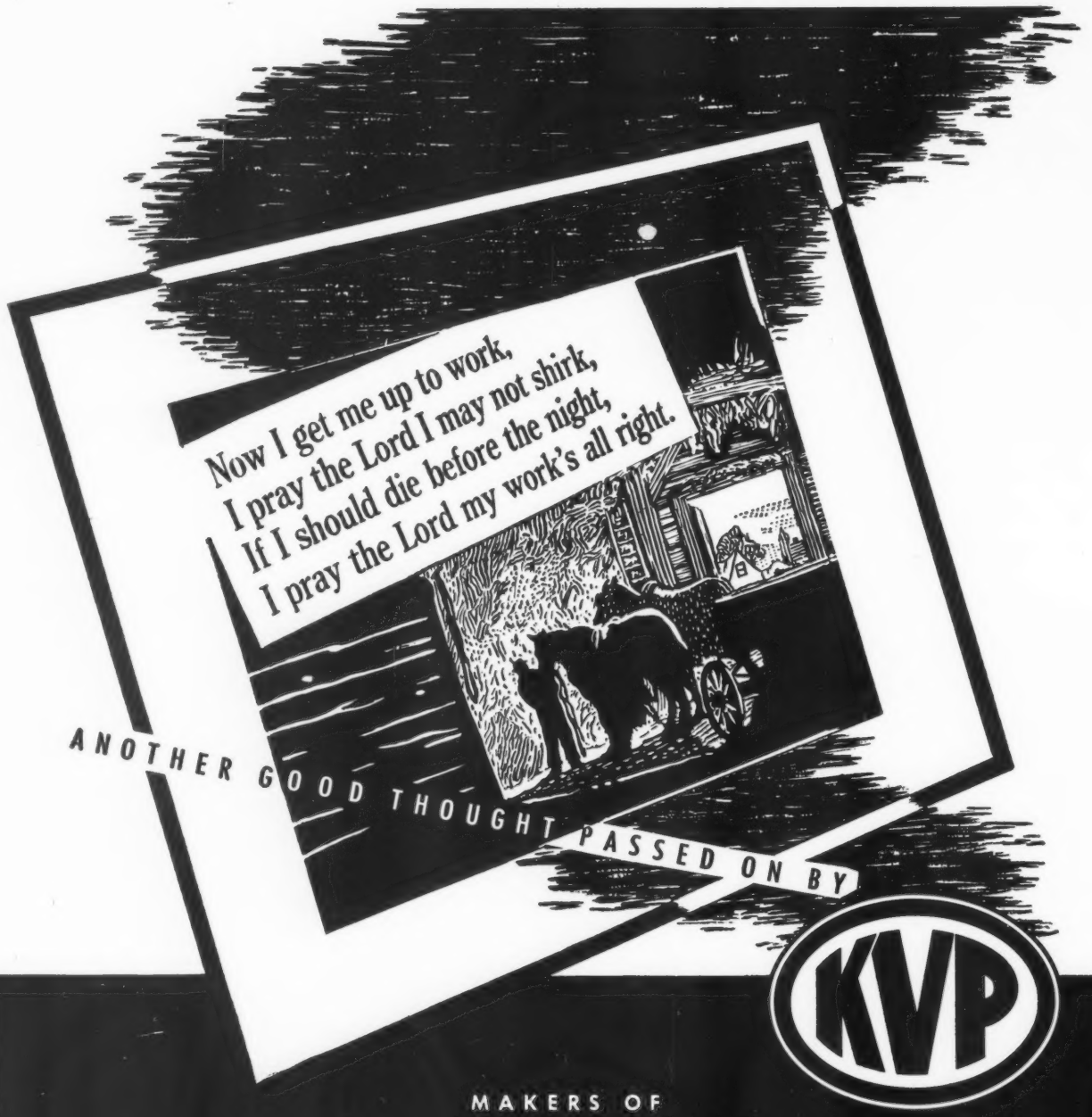
Cartoning costs are further reduced by the versatility of Jones Cartoners. A wide variety of constant motion infeeds can be utilized. One or more leaflets or booklets folded and inserted. Corrugated liners inserted to protect the load. Data printed on cartons. Single or multiple loads inserted. Carton ends full-glued, spot-glued or tucked.

Jones Cartoner efficiency, versatility and high speed combine to reduce your unit cartoning costs to an absolute minimum. Compare your present cartoning methods with Jones Cartoning. Write today for complete information.

R. A. JONES & COMPANY, INC.

P. O. Box 485 CINCINNATI, OHIO

THE MAJORITY OF AMERICA'S CARTONED PRODUCTS ARE JONES CARTONED


Now I get me up to work,
I pray the Lord I may not shirk,
If I should die before the night,
I pray the Lord my work's all right.
ANOTHER GOOD THOUGHT PASSED ON BY
KVP

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FOOD PROTECTION PAPERS

KVP

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PARCHMENT · KALAMAZOO 99 · MICHIGAN
BRANCH PLANTS: DEVON, PENNA. · HOUSTON, TEXAS

HYCAR AMERICAN RUBBER LATEX...

imparts valuable properties to pulp and paper

HYCAR latex added directly to the pulp in the beater or head box, or used as an impregnant for paper, imparts valuable properties not otherwise readily obtained.

Tear and wet strength are considerably increased. Resistance to oils, solvents and chemicals is obtained, with retention of good aging properties. The addition of Hycar also insures excellent flex life and scuff resistance, and in thick papers prevents separation of the laminations.

Thus, better physical properties may be obtained in high grade pulp. In other cases the use of lower grade stock may be permitted because of improved physical properties obtained by the use of Hycar latex. Paper is made adaptable to fields where it is not now used.

Present and potential applications for papers of this sort range from wallpaper to insoles, from gaskets to leather replacement material, from shelf liners to packaging papers.

HYCAR latex is very easy to use. In most applications no vulcanization is required. Normal drying times are used. And HYCAR latex is an inherently safe material to handle. *No solvent system is needed.*

We would be glad to work with you on any problems relating to the use of HYCAR latex. For more information, please write Department HI-5, B. F. Goodrich Chemical Company, Rose Building, Cleveland 15, Ohio.

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American Rubber

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PACKAGING HEADQUARTERS TO AMERICAN INDUSTRY

DRAUGHT OR PACKAGE:

Which is more profitable to the brewing industry?

The year was 1935.

Beer had just been successfully packaged in cans. The cans were trade-marked "Keglined."

And here was how the beer market split up at that time: *75% was sold and consumed in taverns; 25% was packaged for consumption in the home.*

Twelve years slipped by, while the country changed from a depression to defense preparation, to four years of successful war, and back to peacetime reconversion.

And here is how the beer market now splits up in the fall of 1947: *33% is draught and 67% is packaged for home consumption.*

To the brewer the interesting aspect of this change is that his package business is the more profitable end. It affords better brand identification. It is a trend that began with the introduction of that easy-to-take-home package, cans trade-marked "Keglined."

We wish we could claim that even half the home-beer business was in the package we invented. We can't. But we do maintain that our beer can encouraged the wholesome habit of drinking beer at home. Here's the reason we think so.

It's light to carry. You don't have to return it. It saves refrigerator space. It keeps beer at its best. It's easy to discard when empty.

So, it helped switch the brewer's sales from mostly draught to mostly "home" —the more profitable end of the beer business.

We think, therefore, you'll agree that people who do business with Canco profit. And we'd like the opportunity of bringing our packaging know-how to bear on your container problems. To increase your business. To increase your profit.

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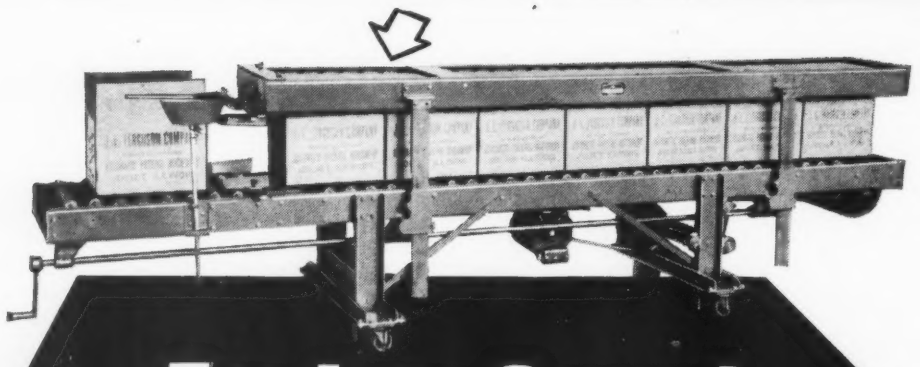

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Whether your shipping case gluing and sealing operation is large or small, continuous or occasional, you will find PACKOMATIC case gluing and sealing equipment to help you.

Where many small runs must be handled daily—or where volume doesn't justify investment in automatic equipment—specify PACKOMATIC's hand-glue, belt compression sealer. Equipped with roller feed table, glue pot and brush, PACKOMATIC's hand-glue compression sealer is a practical, dependable and economical unit for semi-automatically sealing paper shipping cases.

AND HIGH SPEED PAPER SHIPPING CASE SEALING

For large or continuous shipping case gluing and sealing operations up to 3,000 cases per hour—PACKOMATIC's Model D shipping case gluer, with belt compression sealer, reduces handling costs for many of the world's foremost package goods producers.

Adaptable to practically any production requirement or plant layout, built for varying operating speeds, and highly flexible in the application of adhesive, PACKOMATIC's *automatic* Model D shipping case sealer is an adhesive, time, labor and money saver.

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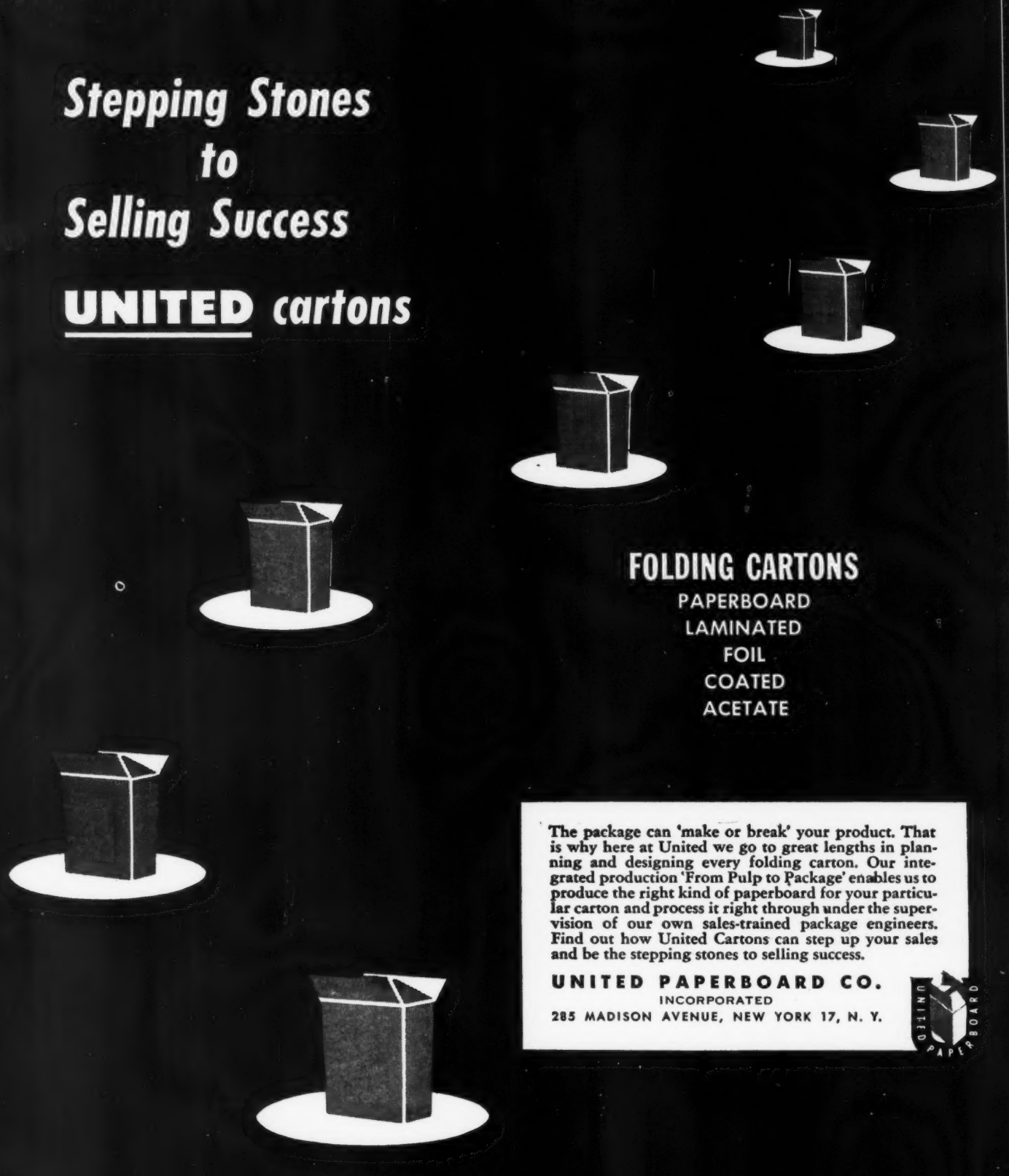

FOLDING CARTONS

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FOIL
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ACETATE

The package can 'make or break' your product. That is why here at United we go to great lengths in planning and designing every folding carton. Our integrated production 'From Pulp to Package' enables us to produce the right kind of paperboard for your particular carton and process it right through under the supervision of our own sales-trained package engineers. Find out how United Cartons can step up your sales and be the stepping stones to selling success.

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FROM PULP TO PACKAGE

Beauty and the Beef...

Store display is a most ephemeral form of advertising...has its brief season on Main Street and in local stores, and vanishes. It may not be clipped for scrapbook or file drawer. Specimens are oversize for storage. Spares are too few to distribute freely. Too often, we lack exhibits of our best work, and can only talk about it!

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The reprint series includes Prophylactic Brush's larger-than-life blonde, the faces that launched thousands of sales for Max Factor and Electric Auto-Lite, the Larus Brothers pipe-smoking fisherman, the good red roast beef of General Foods, the family dinner of Petri Wine...a notable gallery not intended for the pin-up trade, but to be sent on request to any user of display... as evidence of the potent persuasion of fine lithography...and (we hope) as a reminder of where the best may be had.

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He has behind him the full facilities and resources of one of America's most versatile paper manufacturers, now in its second century of experience.

If you think that a specialized paper product can ease your manufacturing, warehousing, distributional, or merchandising grief — or even if you don't see how it possibly can — set the Mead Paper Man to work on the case. He'll sleep not, neither will he eat, while on the trail!

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A NEW ANGLE

FOR NEW BRUSH SALES

The new styles and models in brushes call for something new in packaging . . . and Shaw-Randall has it.

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DESIGNERS AND CREATORS OF VISIBLE PACKAGES

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of our representatives call on you?

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For more sales appeal...

With a transparent seal...

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STICKS WITH A TOUCH

INDUSTRIAL TAPE CORPORATION

New Brunswick, N. J.

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...It's CLAY-COATED—PLUS!
A product of THE GARDNER-RICHARDSON

I was telling you about...

If cartons of *COATED* LITHWITE* are <u>that</u> good we ought to look into them!"

IT'S CLAY-COATED PLUS! That's why Coated Lithwite is so white, bright, prints so brilliantly . . . puts extra eye-and-buy appeal into cartons. That's why it's rub-resisting, fade-resisting, too . . . makes positive seals . . . folds and scores without flaking or shattering.

THIS PLUS begins with the high quality base stock which reflects Gardner-Richardson's 89 years of papermaking experience. It's exactingly level; uniform in caliper. On this base stock the clay coating is evenly filmed by a precision process, pioneered by Gardner-Richardson—proved and improved by 8 years of carefully controlled production.

INCREASED PRODUCTION of *COATED* LITHWITE now enables us to handle additional orders for *COATED* LITHWITE cartons. You will find it worth your while to investigate and see for yourself all the advantages of this clay-coated PLUS Board, in packaging *your product*. Write today.

More eyes reach for your product in cartons of *Coated* Lithwite

The GARDNER-RICHARDSON Company

MANUFACTURERS OF FOLDING CARTONS AND BOXBOARD, MIDDLETOWN, OHIO

*Reg. U. S. Pat. Off. Sales Representatives in Boston • Chicago • Detroit • New York • Philadelphia • Pittsburgh • St. Louis

FOR THE BEST IN PROTECTION

In the field of protective packaging, Riegel serves as a "family physician" for many leading firms. We know what to do if things go wrong, but better still . . . we know how to help keep packaging healthy . . . in appearance, in cost and in production efficiency. For protective papers . . . for special papers of any type . . . always consult Riegel first.

Riegel Papers

FOR
PROTECTION • ECONOMY
PRODUCTION EFFICIENCY

RIEGEL PAPER CORPORATION • 342 MADISON AVENUE, NEW YORK 17, N. Y.

DESIGNED AT NO. 1 PLASTICS AVENUE

Original suggestion for plastics packaging, designed by General Electric.

A Plastics Package in Good Taste to help *Sell Luxury Foods*

Yes, plastics packaging can help sell luxury foods—as this novel spice cabinet, designed in plastics by General Electric, demonstrates. General Electric plastics packaging is helping to merchandise all kinds of products—like cosmetics, jewelry, pen and pencil sets, silverware . . . and scores of other department and specialty store items.

General Electric's *complete* plastics service makes available to you outstanding design facilities that can help you develop just the right package for your particular job. This herb cabinet idea—or another original design tailored to meet your own requirements—can be yours, exclusively, as part of this service.

Remember, too, that G.E. works with *all* types of plastics materials—not just a few. It can recommend the best one for your job. If you are looking for new packaging ideas, if you are marketing a new product or want to stimulate sales on an old one, it will pay you to talk it over with General Electric. Take advantage of this unique packaging service! Write to Section P-8, Plastics Division, Chemical Department, General Electric Company, 1 Plastics Avenue, Pittsfield, Mass.

GENERAL ELECTRIC

CD47-P8

EVERYTHING IN PLASTICS

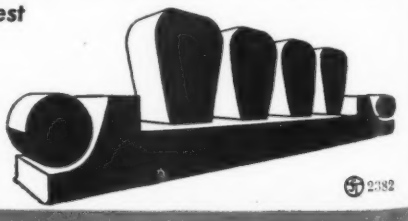
SURE IT'S CELLOPHANE. Rotogravure limited to absorbent stocks? Not a bit of it! Champlain Rotogravure Presses turn out cellophane Chiclets wrappers by the mile. With the patented Speedry fully enclosed ink fountain, Champlain Presses use highly volatile inks and lacquers... on such non-absorbent materials as cellophane, foils, glassine. Yet they handle ordinary papers or package board with equal ease, from fast-moving continuous webs.

SURE IT'S TINY. Web widths of Champlain Presses range from 2 to 36 inches—and no matter how small or large the label, register is uniformly superb. *All* standard Champlain Presses have 360° running register control by push-button. Same control keeps in-line fabricating steps "in true"... perforating, scoring, slitting, glue application, embossing, punching. Yes, besides the normal sheeter or rewind delivery, Champlain Presses can be fully equipped to do whichever of these *fabricating* jobs your package calls for, in one continuous passage of the stock.

SURE GRAVURE COSTS LESS! For all the quality look of gravure printing, gravure actually costs less. Champlain precision-made Presses cost less to operate because they far excel in versatility and speed. Send samples of your present labels, wrappers or inserts for a specific analysis of what Champlain Rotogravure can do for you. Champlain Company, Inc., 88 Llewellyn Avenue, Bloomfield, N. J.

CHAMPLAIN
ROTOGRAVURE PRESSES
rotogravure at its best

Speedry



2182

On rotogravure presses up to 36″ width, the patented Weiss-Speedry ink fountain is an exclusive Champlain feature.

To Our Competitors:—So many of you have *hinted* that you are interested in our 7 POINT LINE of printed papers for inexpensive packaging production, or more commendably written us frankly asking for samples and prices, that we think it would be helpful if we, in this public manner, "give out" with some facts.

1 — This paper is only indicated when cost is the *most* important consideration.

2 — There are only 16 base colors and white. Special colors can't be supplied under today's conditions except in very unusual cases.

3 — There are none of the old printed designs such as ordinary stripes, Art Linen, Blocks, etc., available. The 5 standard designs are new and are only suitable for boxes containing textiles, shoes, food products, automotive parts, stationery, toys, etc., etc., etc.

4 — It only comes in one width roll (30") though, of course, we can slit to smaller sizes if needed.

5 — The lowest price for 1 roll in 2 designs on certain colored bases is $4.95 per ream. The highest price for 1 roll is $6.00 per ream for 1 of the designs on 1 of the base colors.

6 — This paper is not coated; it is printed. It is not friction flint, enameled or pyroxylin coated, and it will not be satisfactory where the special properties peculiar to those finishes are required.

7 — We are perfectly willing to send any interested inquirer samples and prices, provided they write us on their business stationery.

Matthias Paper Corporation, 165 W. Berks Street, Philadelphia 22, Pa.: New England — 12 Brook Street, Wellesley 81, Mass.; Southern Office — Guilford Building, Greensboro, N. C.

DESIGN

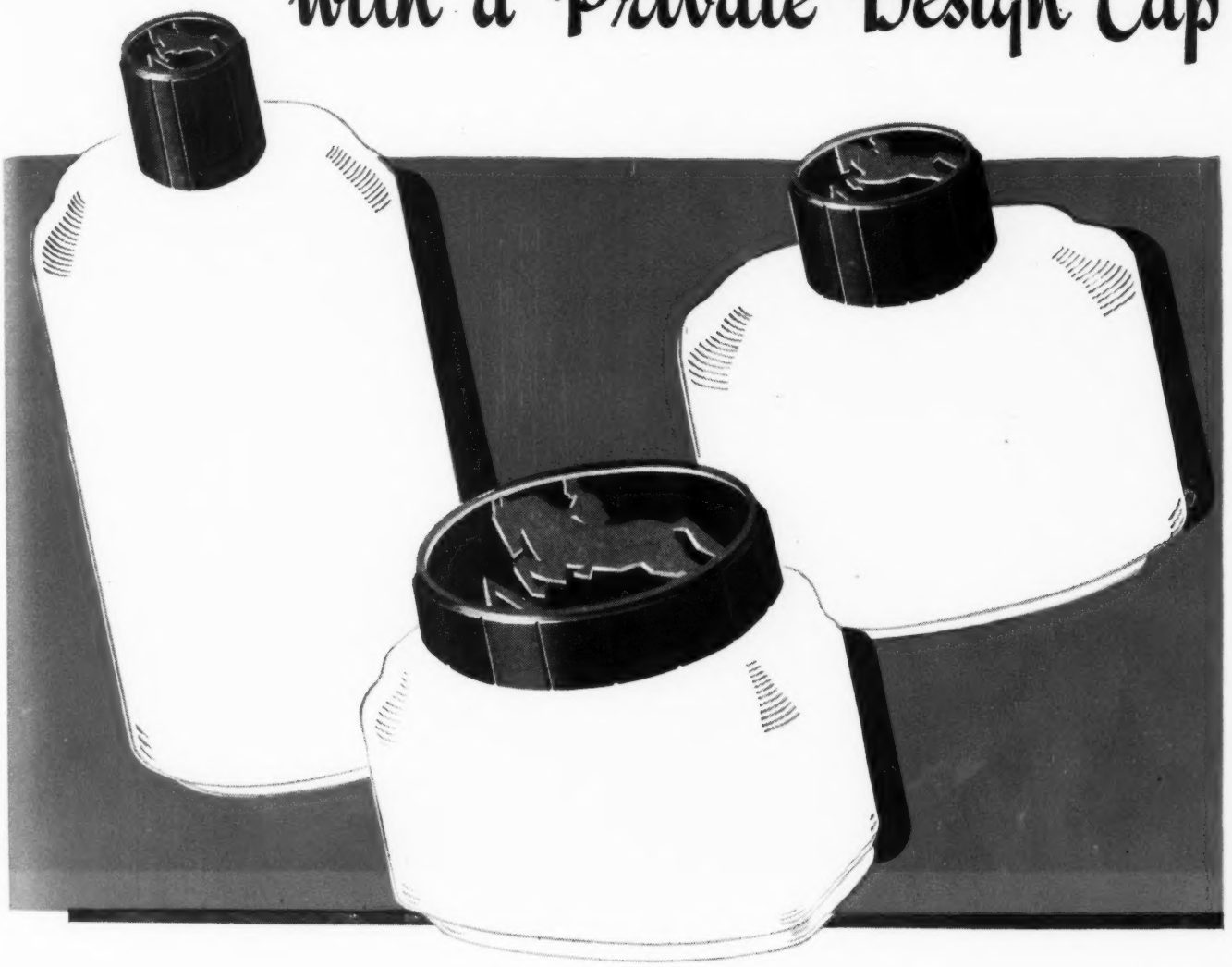
DESIGN To produce customer recognition—

product identification.

CHICAGO CARTON COMPANY

4200 SOUTH CRAWFORD AVENUE • CHICAGO 32, ILLINOIS

Individualize your package with a Private Design Cap



The individuality gained by using an Armstrong's Artmold Cap emphasizes the quality of your product and makes a lasting impression on the customer's memory. And a distinctive package is a step toward greater sales. The three Armstrong's Artmold Cap designs shown above may suggest ways to enhance the appearance of your package and give it an air of quality that can be achieved in no other way. Once selected, your Artmold cap is exclusively yours. For design and color suggestions, cost estimates, including mold costs, send us a sample or drawing of your package. Armstrong Cork Company, Glass and Closure Division, 5910 Prince Street, Lancaster, Penna.

ARMSTRONG'S *Artmold* CAPS
PLASTIC

P-45---a new stock bottle in line with Swindell's tradition of quality

It's ready now! Swindell's new stock bottle, designed along classic lines that hold special interest for the perfume and cosmetic trade!

Available for immediate delivery in ⅛ ounce, ¼ ounce, ½ ounce, 1, 2, 3, 4, 6, 8, and 16 ounce sizes.

SWINDELL BROS., BALTIMORE, MD.
200 FIFTH AVENUE, NEW YORK • ROBERTO ORTIZ—HAVANA, CUBA

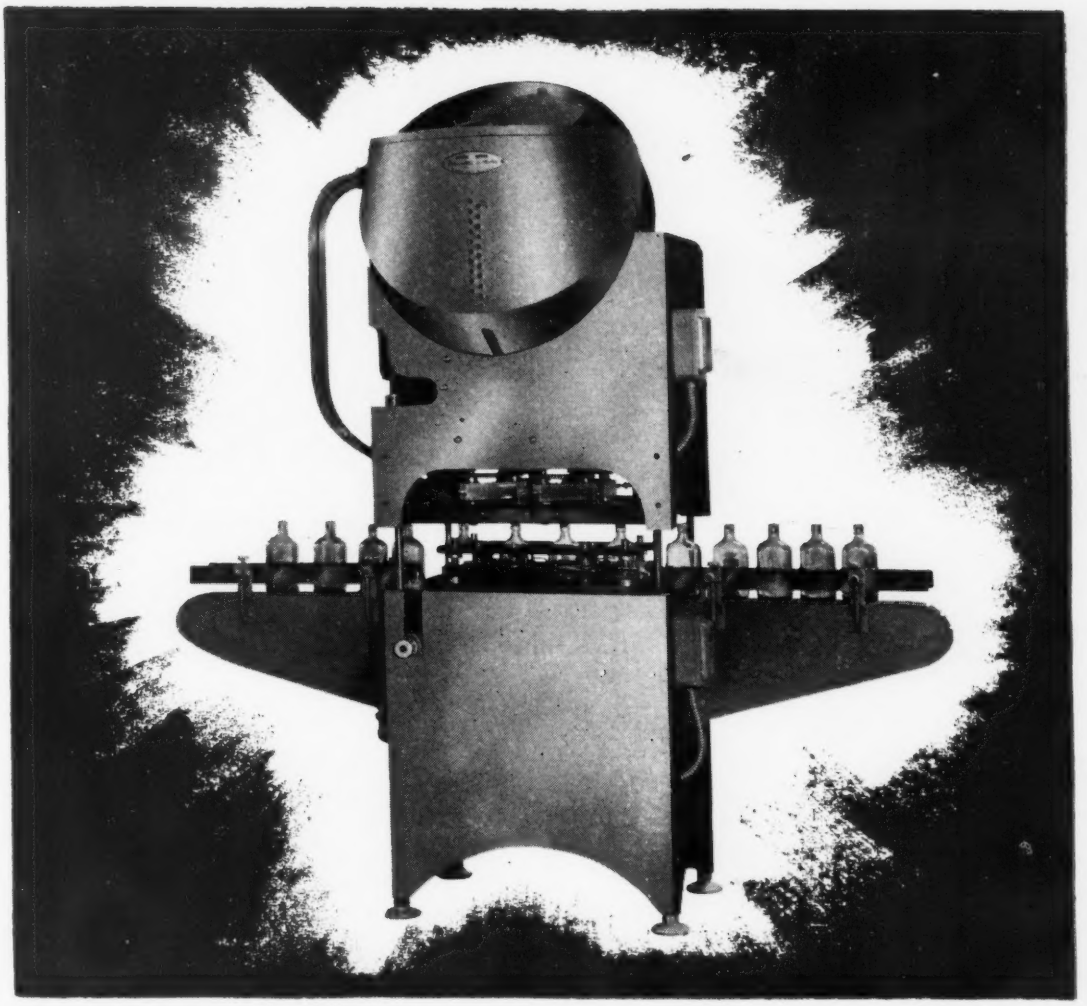
When you think of bottles think of

Swindell

★

ATTRACTIVELY PRICED — EVEN FOR SMALL PLANTS

These machines have been in successful commercial operation for over 3 years — write for complete details.



THE POMONA STRAIGHT LINE AUTOMATIC SCREW CAPPER*

...tops them all

For flexibility of operation . . . one container or 150 per minute; 18mm to 72mm screw caps, metal or plastic; cans or bottles, 2″ to 15″ high, 1½ to 6″ wide; round, square, flat or triangular containers.

†ops them all... For simplicity of operation . . . no change of direction, no stopping, no spilling; no shock of any kind to containers; no timing problems, no indexing, no high speed mechanisms.

†ops them all... For profitable operation . . . changeover in 15 minutes • high production; on the spot service • low maintenance.

Pomona Machine Works

163 East Commercial Street POMONA, CALIFORNIA

Manufacturers of

POMONA AUTOMATIC ROTARY FILLER • POMONA AUTOMATIC AND SEMI-AUTOMATIC STRAIGHT LINE FILLERS • POMONA CARTON SEALER • POMONA UNSCRAMBLER

PMW MACHINE WORKS

* Patents Pending

SALES AND SERVICE AGENTS IN ALL MAJOR CITIES

High speed application
Leakproof sealing
Finger tip opening
Are your closures as good as your product?
If you're proud of your product, provide positive sealing with non-rusting, easy-to-open Alseco aluminum caps.
TAILOR-MADE OF ALCOA ALUMINUM
ALSECO SEALS
AND SEALING MACHINES
ALUMINUM SEAL COMPANY
RICHMOND, INDIANA
SUBSIDIARY OF ALUMINUM COMPANY OF AMERICA

A lone or with other materials . . . in

B oxes, bowls with re-use value

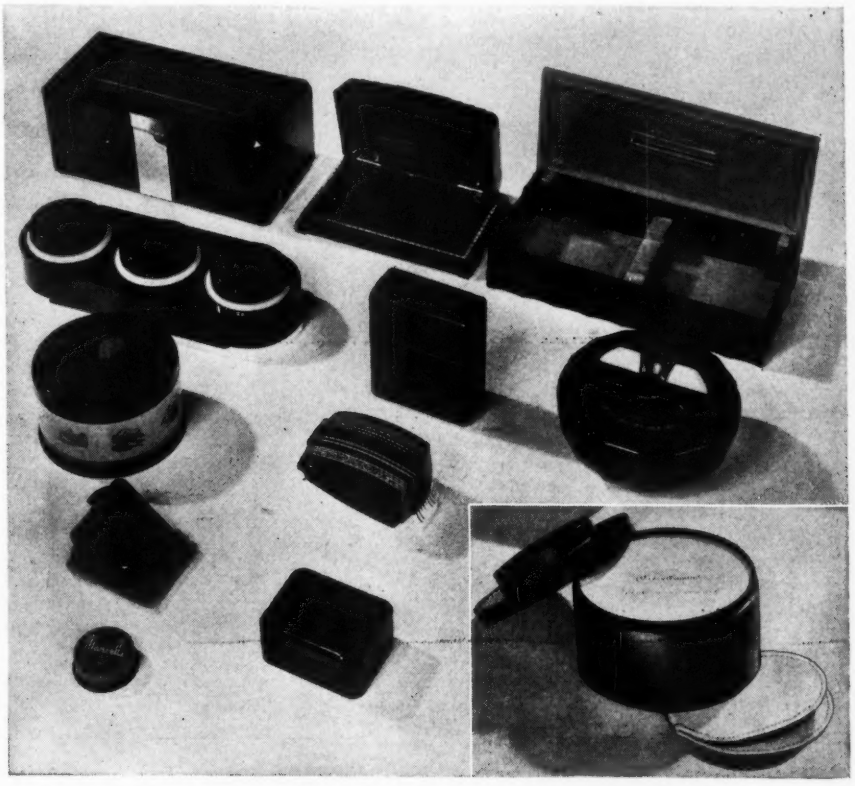
C overs, cases with Sales Appeal

D urez Phenolic Plastics

● Products are as different as people. What better way to emphasize their personality than to package them in Durez phenolic plastics?

Our picture only begins to suggest the infinite variety obtainable with these most versatile of plastics. You can combine Durez with other materials for harmony or contrast. Use it with metal, leather, fabrics, cork sheets, glass, or, where economy dictates, metal foil, Fabricoid, or novelty papers.

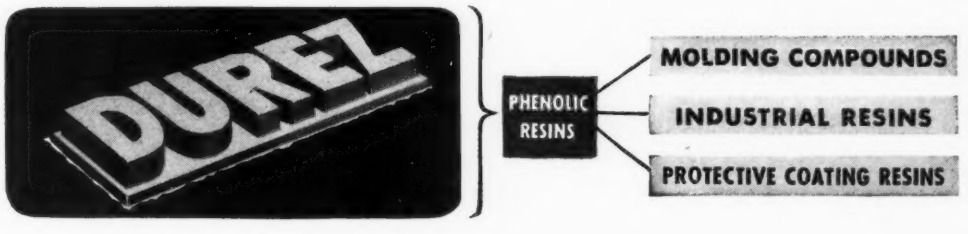
No matter what the other components may be, your package will have the satiny, lustrous finish and the firm durable feel of Durez...the appeal that makes people want what's inside.



Durez Easy to Work With

Your designer and molder can tell you how well Durez lends itself to production. It has excellent moldability and is readily formable to unusual designs. It is non-bleeding, an essential property in closures. It takes a variety of finishes. And when heat resistance, impact strength, and resistance to alkalies and acids are desirable, you have them all in Durez.

Regardless of what you package, or how you merchandise your line, the success of others suggests consideration of Durez first. Our long experience in working with packaging leaders is at your disposal and your molder's. Durez Plastics & Chemicals, Inc., 2510 Walck Road, North Tonawanda, N. Y.



PHENOLIC PLASTICS THAT FIT THE JOB

A "FAMILY" uses S&S equipment

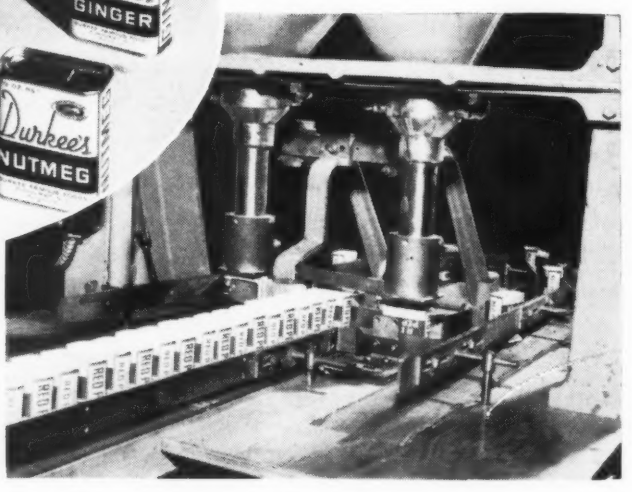
Recently, at the 11th national packaging show, Durkee Famous Foods received the blue ribbon award for their *entire family of spices.* No fewer than *eleven* individual packages were included in the award.

Naturally, Stokes & Smith is proud to have played a part in this happy event, as the prize-winning packages were all filled by Stokes & Smith equipment. Leading firms have long recognized the superiority of S&S filling, packaging and wrapping machines — machines at speeds to suit your needs.

(Center) The Durkee family of spices, blue ribbon winner at the 11th national packaging show.

(Left) Illustration shows Model HG84 Automatic Duplex Filling Machine.

(Below) A close-up view showing Duplex Auger Feed.



STOKES & SMITH Co

PACKAGING MACHINERY — PAPER BOX MACHINERY

FRANKFORD, PHILADELPHIA 24, PENNA.

FILLING • PACKAGING • WRAPPING MACHINES

Speeds to suit your needs—15 • 30 • 60 • 120 per minute

"Better machines for better packages"

kromekote gets around*

REG. U.S. PAT. OFF.

. . . GOES AROUND BOXES, BOTTLES,

JARS, AS WRAP AND LABEL . . . AND AROUND AMONG

PROSPECTS AND CUSTOMERS AS ADVERTISING

THAT GAINS ATTENTION AND PROFIT

THE CHAMPION PAPER AND FIBRE COMPANY
HAMILTON, OHIO

District Sales Offices: NEW YORK · CHICAGO · PHILADELPHIA · DETROIT · ST. LOUIS
CINCINNATI · ATLANTA · SAN FRANCISCO

**Champion's Cast Coated High Finish Paper*

Variety

ADDS SPARKLE .... PERSONALITY PLUS

Let's take Cheese . . . as a good example of merchandising for tomorrow

Cheese . . . a product known for its individuality . . . just naturally must be clothed in packages of compelling personality. . .

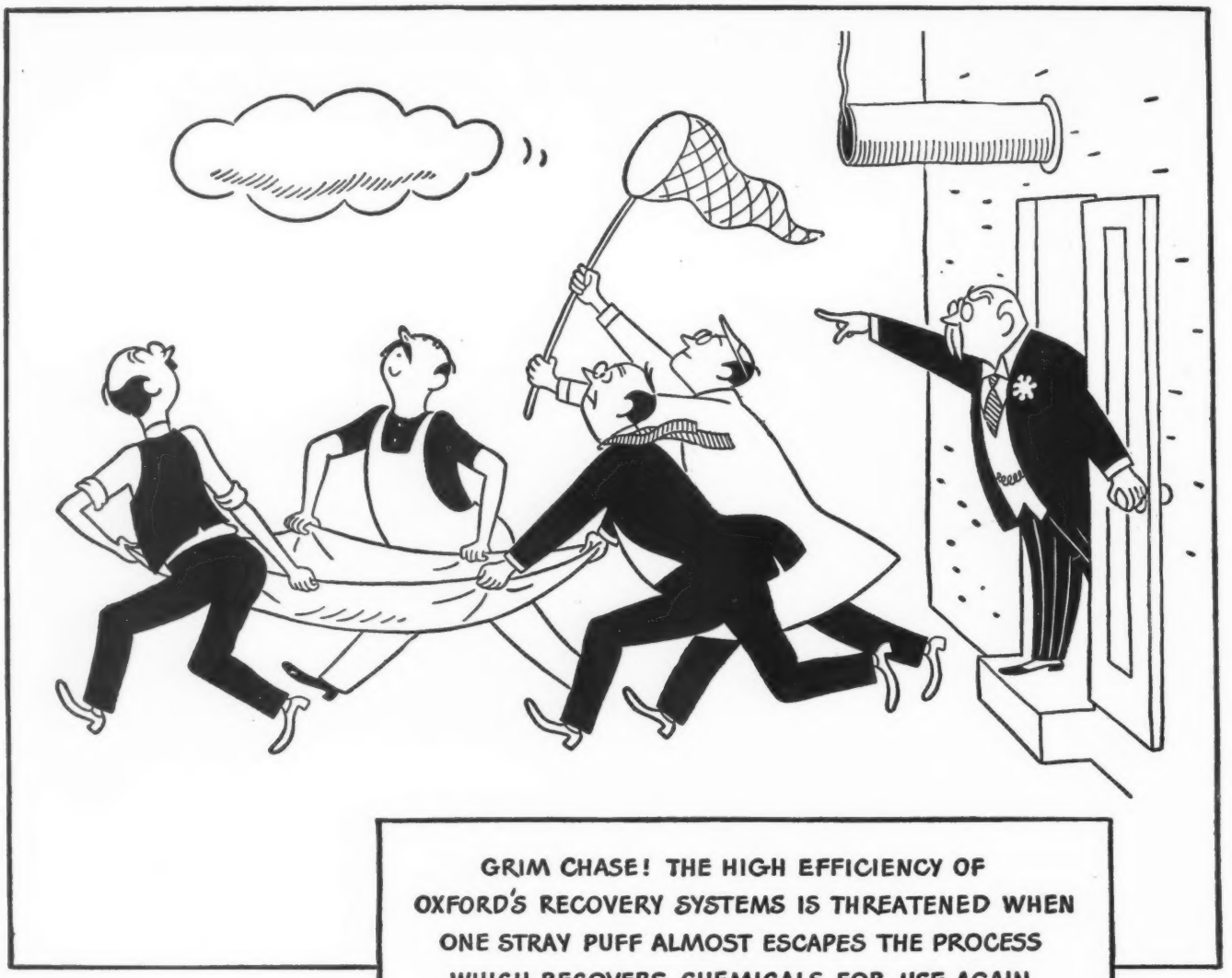
. . . CLEVELAND CONTAINERS, OF COURSE!

YOUR needs will be met with new creative ideas . . . based on sound engineering principles . . . backed by low costs through large manufacturing output . . . sealed with close customer cooperation. Consult us.

CLEVELAND CONTAINERS offer infinite variety . . . help solve package problems

The CLEVELAND CONTAINER Co.
6201 BARBERTON AVE. CLEVELAND 2, OHIO
• All-Fibre Cans • Combination Metal and Paper Cans
• Spirally Wound Tubes and Cores for all Purposes
• Plastic and Combination Paper and Plastic Items
★ ★ ★
PRODUCTION PLANTS also at Plymouth, Wisc., Ogdensburg, N. Y., Chicago, Ill., Detroit, Mich., Jamesburg, N. J.
PLASTICS DIVISION at Plymouth, Wisc., Ogdensburg, N. Y. • ABRASIVE DIVISION at Cleveland, Ohio. • N. Y. SALES OFFICE — 1106 Broadway, Room 223 • IN CANADA — The Cleveland Container Canada Ltd., Prescott, Ontario.

Near Crisis at Oxford Paper Company by Tony Barlow



GRIM CHASE! THE HIGH EFFICIENCY OF OXFORD'S RECOVERY SYSTEMS IS THREATENED WHEN ONE STRAY PUFF ALMOST ESCAPES THE PROCESS WHICH RECOVERS CHEMICALS FOR USE AGAIN

LOOK at the way a business handles its details and you get a good picture of its efficiency. Here at Oxford no detail is too small for attention if it contributes to the over-all job of making paper better.

For example, chemicals play an important part in the series of steps which transform wood into a sheet of paper. After these chemicals have performed their part in the process, the inorganic residue is trapped by an ingenious recovery system which makes a substantial proportion of these chemicals available for use again. Even an item like this must be considered in the careful planning that enables Oxford to turn out better than 1,000 miles of quality paper every day.

For the making of quality paper is not one thing, but many. Each element—good location, plentiful reserves, fine craftsmanship and thorough planning—adds up to satisfaction for users of Oxford papers.

On your next printing job, specify Oxford papers for complete satisfaction. Sold by reliable merchants coast to coast.

Included in Oxford's line of quality printing and label papers are: Polar Superfine Enamel, Maineflex Enamel Offset, Maineflex C1S Litho, Mainefold Enamel, White Seal Enamel, Engravatone Coated, Carfax English Finish, Super and Antique, Aquaset Offset and Duplex Label.

OXFORD PAPER COMPANY

230 PARK AVENUE, NEW YORK 17, N.Y.

MILLS at Rumford, Maine and West Carrollton, Ohio *WESTERN SALES OFFICE: 35 East Wacker Drive, Chicago 1, Ill.* *DISTRIBUTORS in 48 Key Cities*

TRANSPARENT PACKAGES

by Traver . . .

TURKEYS

Fifteen seconds to a bird: Complete packaging with an air-tight seal is made possible in this record time with TRALON, adaptable new plastic packing material by Traver. As the bird is placed in this sturdy, patented ROUND END bag, all air is evacuated and a quick tie leaves the turkey thoroughly protected in semi-vacuum.

TRALON is ideal for packaging turkey quarters and halves. Small portions of poultry packaged in TRALON retain all of the natural flavor and tenderness of a whole bird without dehydration.

TRALON is an inert substance—tasteless, odorless, greaseproof, waterproof and freezeproof—which assures complete preservation. Attractively printed TRALON creates demand: Consumers remember quality and ask for TRALON-packaged birds.

Members of the Washington Cooperative Poultry division and Traver technicians make a pleased inspection of a TRALON-wrapped turkey off the production line.

Confident of the full protection afforded by the flexible TRALON ROUND END bag, a worker packs a box of turkeys for shipment.

Photos show Traver transparent sales package in actual use

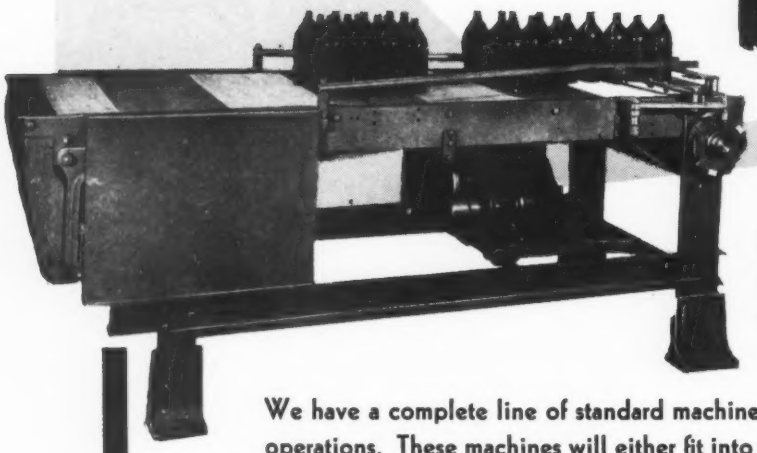
Traver Corporation

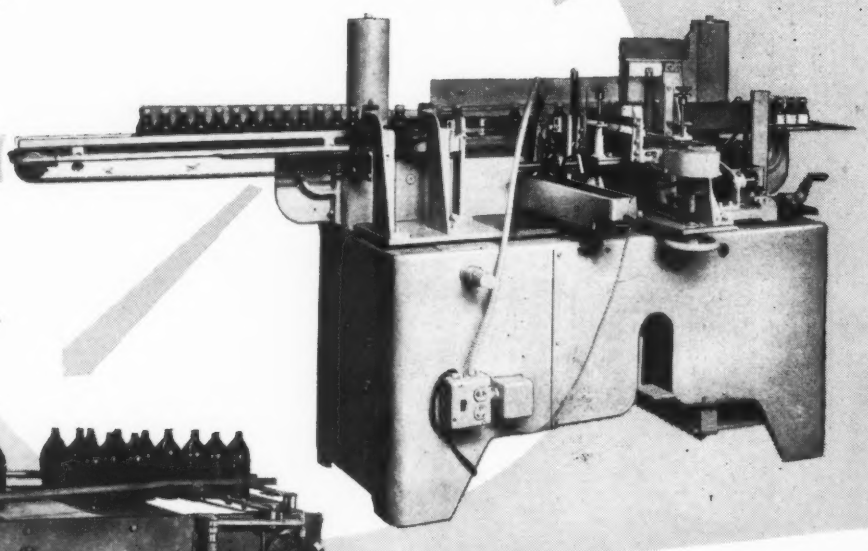
WRITE OR WIRE FOR INFORMATION

366 WEST ONTARIO STREET, CHICAGO 10, ILLINOIS

CONVERTERS, PRINTERS-CELLOPHANE, PLASTICS, ACETATES, FOIL AND GLASSINE

Clip Hours from your PRODUCTION SCHEDULE





If you are interested in clipping seconds, minutes, hours from the time it takes you to turn out a finished package, our design engineers can be of service to you.

We have a complete line of standard machines for filling, packing, labelling, sealing, sorting operations. These machines will either fit into your present production line or can be hooked up on a special conveyor system which we can design to fit your particular plant layout.

But whether you get a single machine or an entire system from Standard-Knapp, you are sure of well-designed and well-constructed equipment that functions smoothly and accurately. For Standard-Knapp machines operate with a maximum of speed and efficiency and a minimum of moving parts.

All Standard-Knapp machines are precision-built. Many years' experience in the design and application of packaging machinery is your assurance of competent handling of your packaging problems.

Standard-Knapp Corporation

MANUFACTURERS OF CASE SEALING, CASE PACKAGING AND CAN LABELING MACHINES
FACTORY and GENERAL OFFICES—PORTLAND, CONNECTICUT

570 Lexington Avenue
NEW YORK 22, N. Y.

420 S. San Pedro Street
LOS ANGELES 13, CALIF.

6 Radcliffe Rd.
ALLSTON 34 (Boston), MASS.

221 North La Salle St.
CHICAGO 1, ILL.

3222 Western Avenue
SEATTLE 99, WASH.

Royal Bank Bldg., Barton & Wentworth Sts.
Hamilton, ONTARIO, CANADA

145 Public Square
CLEVELAND 14, OHIO

1412 N. W. 14th Avenue
PORTLAND 5, OREGON

Orlando
FLORIDA

500 Seventh Street
SAN FRANCISCO 3, CALIF.

349-350 Paul Brown Bldg.
ST. LOUIS 1, MO.

Windsor House, Victoria St.
LONDON S. W. 1, ENG.

The secret of the superiority of A. C. M. Clay Coated Cartons is in the pure white, velvet-smooth surface.

Colors print brilliantly, halftones have true realism, the entire design is reproduced in finest detail for maximum eye-appeal. And it's lasting, too, for the white surface of A. C. M. Clay Coated Cartons is non-yellowing — stays clean, bright and attractive.

There's an A. C. M. Clay Coated Carton that will make *your products* stand out in any competition! Present demand for these sales-building cartons has production taxed to the utmost, but plant facilities are being expanded as rapidly as possible to meet future requirements.

STAND-OUT FEATURES

Whiter–brighter–smoother –tougher—more uniform– more rigid–non-yellowing –fold better–print better.

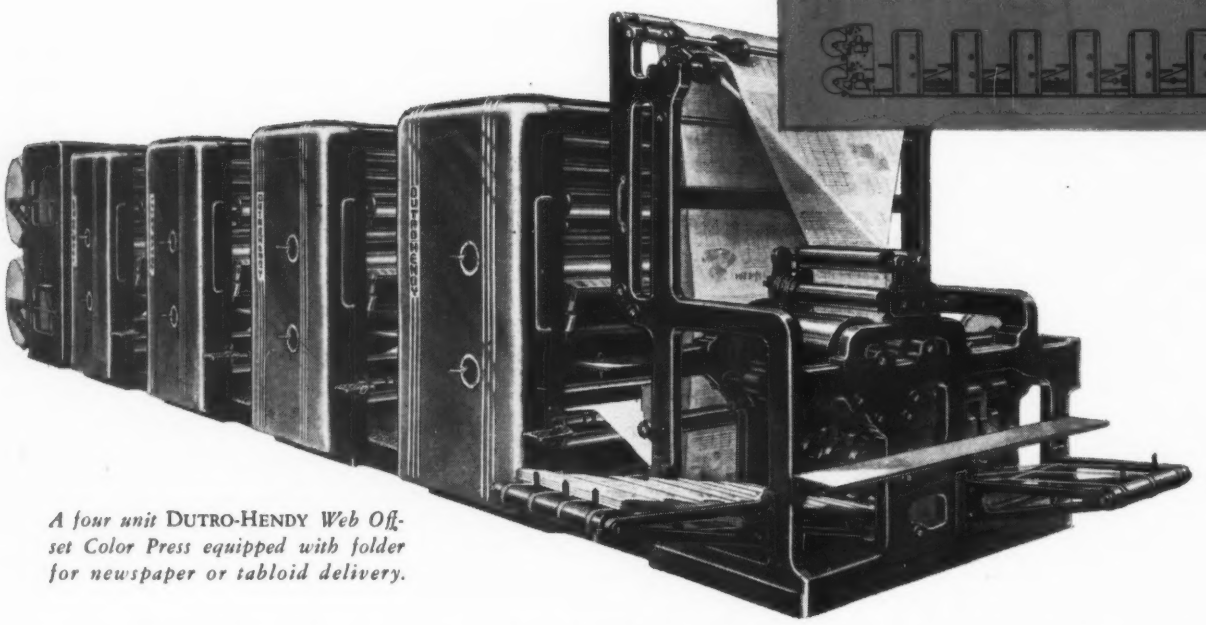
The Secret is in the SURFACE!

AMERICAN COATING MILLS.
Division of Owens-Illinois Glass Co.
America's Largest Producers of High Quality Clay Coated Cartons and Carton Board
Elkhart, Indiana • Chicago • New York
Affiliated Company: Modern Packages, Inc., Memphis, Tenn.

A.C.M. Clay Coated Cartons
and carton board

Get the Story Now!

THE REVOLUTIONARY Dutro-Hendy WEB OFFSET PRESS



A four unit DUTRO-HENDY *Web Offset Color Press equipped with folder for newspaper or tabloid delivery.*

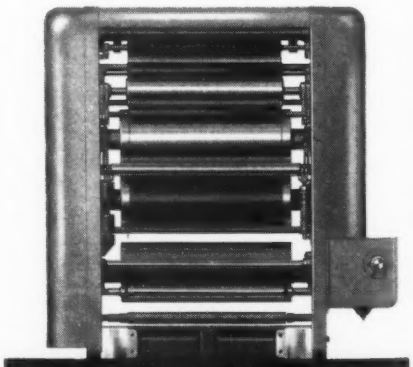
SOMETHING REALLY NEW IN THE WEB OFFSET FIELD

HERE ARE THE QUICK FACTS about the sturdy, streamlined DUTRO-HENDY Web Offset Press—the new all-use lithographic color press that has a place in all types of printing plants... AND WHY? Because of its ability to print IN COLOR on stocks ranging from light weight papers to light tag—INCLUDING NEWSPRINT, and using *up to 300 line halftone screen* on all of them. That means newspapers—full size or tabloid, or special sections. It includes complete publications—calendars—posters—maps and atlases—store display material—telephone books—directories—catalogs—magazine and color inserts—children's books—novels—funny papers—school books—office forms—wrappers—labels—light weight packaging materials—and such direct advertising as folders, broadsides, brochures and envelope enclosures... And with quick shift from one kind of job to another that means maximum press production.

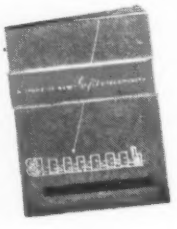
SPEED? Much faster than sheet fed presses—up to 15,000 cylinder impressions per hour, depending upon the stock and type of delivery. FRONT and BACK COLOR PRINTING—in any combination, for any number of colors (one color for each unit). FLEXIBLE—additional color units can be added as desired. MAKE-READY—an hour *or less* per color by using pre-registered plates. QUICK SHIFT—less than a minute change-over time from folder to receding pile delivery or rewinder.

COMPLETELY AUTOMATIC — by electric control button the water, inking and impression rollers go into operating position in proper sequence and with proper timing, and on all units simultaneously . . . A very important feature.

See the Working Demonstrations to be held soon at the new $6,000,000 home of Pacific Press, Inc., Los Angeles. *Watch for dates.*



Front Elevation of a Single Color Unit of the DUTRO-HENDY Automatic Web Offset Press



READY NOW—

your copy of "A Story of Profit Opportunity." It gives additional specific information about this new, modern press—the "money-maker press."

JOSHUA HENDY CORPORATION

601 WEST 5TH STREET, LOS ANGELES 13, CALIFORNIA

HOW WELL ARE YOUR PRODUCTS KNOWN?

Leading Manufacturers Enhance Product Identity with THILCO *Printed and Embossed Wrappings!*

Decorative packaging of your product increases its merchandising value in more ways than one. Besides establishing trade-mark or name identity, Thilco decorated wrappings build good will and prestige by helping to create outside evidence of inside quality. They provide a low cost advertising medium . . . discourage competitive brand substitution . . . and increase consumer demand through eye-appeal which results in profitable sales. Although protection is primary, the beauty of Thilco decorated papers is more than skin deep for their colorful appeal in either custom or stock design patterns can be applied to our complete line of *functional* papers and bags. Our technical and design staff will be glad to help you with your problems.

Thilco decorating includes standard and friction embossing and Aniline and Gravure color printing. Left: Typical example of modern design packaging with eye-appeal and "buy" appeal furnished in both wrapping and bags.

THILCO *Functional* PAPERS

THILMANY
PULP & PAPER COMPANY
KAUKAUNA · WISCONSIN

for HOUR after HOUR of continuous operation— the SHUMANN BAG MACHINE

Profit by our years of experience. Built, tested, and proved by a commercial bag manufacturer, the SHUMANN Bag Machine is practically fool-proof. It is fully automatic and ruggedly constructed for steady production. Operation is continuous—without lost time due to breakdowns.

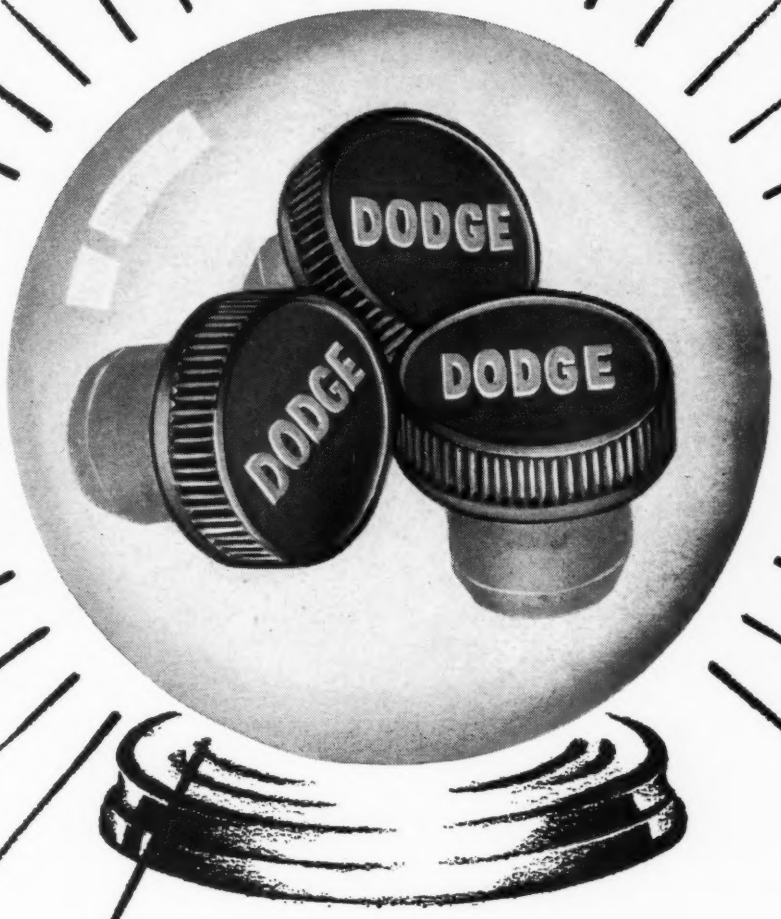
The SHUMANN Bag Machine makes bags with the "Crimp Seal" bottom for absolute moisture-proof and sift-proof protection. Handles all types of heat sealing materials. Makes either single or duplex bags, flat or gusset type, in any size from 1½" x 1½" to 12" x 16".

For perfectly sealed bags, with printing perfectly registered, and with lowest unit cost, investigate the SHUMANN Bag Machine. We will gladly arrange a demonstration to prove to you its many advantages. Write today for full information.

SHUMANN
EQUIPMENT COMPANY
Everything in Packaging

1206 E. Carson Street Pittsburgh 3, Pa.

BRIGHT OUTLOOK FOR YOUR SALES



DODGE MILBOSSED-TOP CORKS

WHEN you seal with a Dodge Milbossed-Top Cork, your product is dressed to sell. These attractive, colorful closures add distinction to your package . . . help identify it as yours and nobody else's.

The contents of your package gets the utmost protection from a perfect seal of high grade natural cork. Tops are made of choice hardwood . . . durable, cleanly knurled.

Dodge Milbossed-Top Corks are easy to remove and replace. They are furnished in a wide variety of sizes, colors and designs to meet your specific requirements.

In this colorful folder you will see how Dodge makes closures to seal and sell. It takes you on a tour of the plant . . . shows step-by-step just how it's done. Write today for your free copy.

DODGE CORK COMPANY, INC., LANCASTER, PA.

DODGE CORK CLOSURES

designed to Guard the Integrity of the Contents

ALL FOIL AND MORE THAN A YARD WIDE

Here's welcome news for converters . . . Cochran continues to lead the field in bringing you Aluminum Foil in more economical 36½" width rolls . . . gauge .00035 or heavier.

For jobs requiring wide widths, this new 36½" Cochran Foil is the answer. The economy in lower converting costs involving products of any width is readily apparent.

COCHRAN ALUMINUM FOIL IS ALWAYS DEPENDABLE

Its matchless quality is the result of constant scientific research and development and now . . . in rolls 10" wider than heretofore obtainable . . . the utmost in rolled Aluminum Foil is yours.

COCHRAN FOIL COMPANY, INCORPORATED · cofco · LOUISVILLE · 10 · KENTUCKY · U.S.A.

COCHRAN FOIL COMPANY, INC., LOUISVILLE 10, KENTUCKY

Sales Offices

600 - 15th Ave., South
Minneapolis 4, Minn.

622 Fisher Building
Detroit 2, Michigan

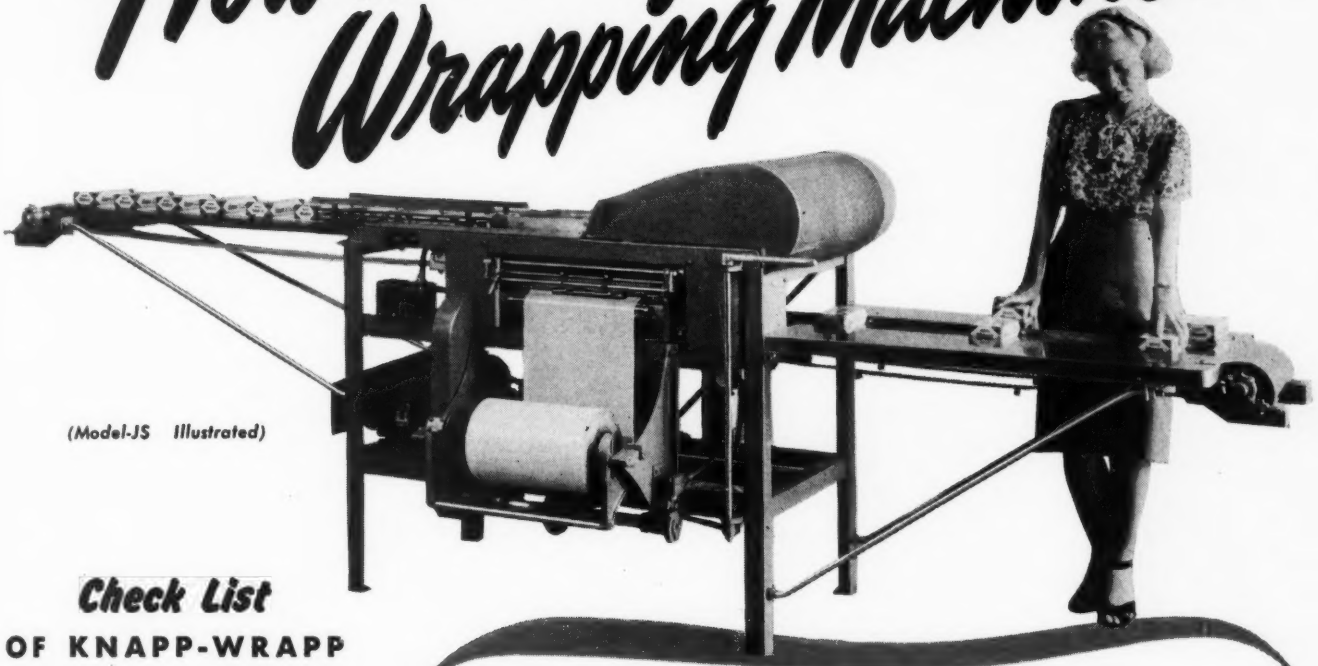
Gothic Suite • 527 Lexington Ave.
New York 17, New York

238 West Wisconsin Ave.
Milwaukee 3, Wisconsin

2032 East 22nd St.
Cleveland 15, Ohio

YOU'D LIKE A POST-WAR CAR—

How about a Post-war Wrapping Machine?



(Model-JS Illustrated)

Check List OF KNAPP-WRAPP SPECIFICATIONS

- Carton Sizes: Minimum ½" x 1½" x 1½"; maximum 4½" x 6" x 10".
- Speed: 60 to 70 per minute.
- Equipped with ½ H.P. motor, single or three phase.
- Suitable for Cellophane, Wax Paper and Heat Sealing Foil, printed or plain.
- Light weight, sturdy construction, free of vibration.
- Positive chain package feed.
- Thermostatic heat control.
- Design simplicity with fewer working parts minimizes upkeep.
- Furnished with or without electric eyes.
- Built to do one job . . . your job . . . and to do that job continuously and with perfection!

The Tailor-Made

KNAPP-WRAPP

Don't Just Wrap — "Knapp-Wrapp"

Yes, you're probably looking forward to the thrill of gliding along the highways in a smart, sleek, smooth post-war car . . . BUT . . . how about your wrapping machine? Isn't it many times older than your old car? Wouldn't you be saving a lot of time and money . . . creeping production lines, sloppy packages, breakdown and change-over losses . . . by having a post-war KNAPP-WRAPP of improved design and efficiency! The KNAPP-WRAPP is tailor-made to your particular package . . . produces at high speeds . . . gives taut, sparkling wraps . . . has a remarkably low initial cost and minimum upkeep. You owe it to your business to investigate the KNAPP-WRAPP!

PROMPT DELIVERY! ACT NOW! WRITE NOW!

Send Sample of your Product

KNAPP MANUFACTURING CO.
2568 San Fernando Road Los Angeles 41, Calif.
I enclose a sample of our product. We would like to know the specifications, performance, and cost of a KNAPP-WRAPP to do our job right!

Name_____

Address_____

City_____

THREE OTHER MODELS AVAILABLE:

Model-KW: Feeds and discharges at one end for one operator.

Model-FS: Semi-automatic Bench model. Speeds 200-600 per hour.

Model-SA: Semi-automatic by foot lever. Speeds: to 1000 per hour.

"HAVE A TUBE OF BEER"

Because this story makes a point which should prove important to your business, we ask you to imagine, just for a moment, that you are a brewer . . . and that you've decided to revolutionize the beer business by merchandising your brew in collapsible tubes. In that case, you'd be faced with three staggering jobs:

One *Complete reorganization of your packaging plant layout.*

Two *New machinery and handling equipment not obtainable through regular supply sources—for performing functions foreign to all past packaging experience.*

Three *Thorough indoctrination of your personnel in strange new packing procedures.*

The important point is this. . . . In Codie-Kay you'd find a firm of versatile and inventive packaging engineers who specialize in assignments which, like this one, call for successful solutions to out-of-the-ordinary packaging problems. Our functions include the *designing* and building of special equipment for handling and packaging special products, the planning of complete packaging plant layouts, and the training of plant personnel.

Therefore, if you're preparing to package a new product, to alter the package of a present one, or if your packaging department is not running at maximum efficiency, call us in for a preliminary survey. Send your letter to Codie-Kay Co., Inc., 1139 San Julian Street, Los Angeles 15, California.

Codie-Kay
COMPANY, INC.

SPECIALISTS IN THE DESIGN AND MANUFACTURE OF COMPLETE PRODUCTION PACKAGING SYSTEMS.

IF STANDARD EQUIPMENT WON'T DO THE JOB, CODIE-KAY WILL.

Bottle #B861 is well suited to sodium hypochlorite. Your label treatment makes it a distinctive package.

Does your package keep your product sold?

Here are the features housewives want most in packages for household products. They are features that help *sell* your product—and *keep* it sold:

PROTECTION . . . A *selling* package must provide complete protection of the product's quality, should be *unable* to react with the product. It should reseal air-tight to keep contents from spilling or evaporating.

CONVENIENCE . . . The container should be practical in use, easy to hold, to open, to reseal, to keep clean; it should display the contents—their condition and amount; it should have a balanced, nontip base.

Stock containers in the Duraglas drug, chemical and toiletry line combine these advantages with the all-around economy and production efficiency you demand. Look to the more than 1400 different sizes and styles that make up this line for the *exactly right* container for *your* product!

Duraglas CONTAINERS—Protectors of Quality

OWENS-ILLINOIS GLASS COMPANY, TOLEDO 1, OHIO Branches in Principal Cities

"The bigger the family—the better the service"

CONTINENTAL PAPER DIVISION

CAN COMPANY, INC.

PAPER DIVISION Headquarters
330 W. 42d St., New York 18, N. Y.

MONO NESTED AND CYLINDRICAL CONTAINERS

COMBINATION PAPER-AND-METAL CANS

FIBRE DRUMS The Container Co., Van Wert, Ohio

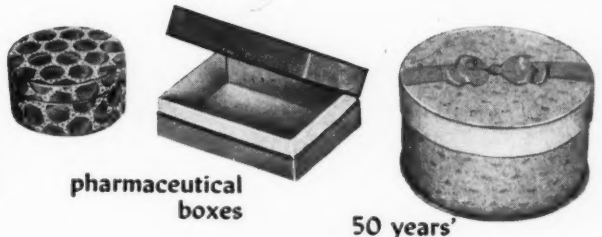
Sales offices in all principal cities

Attention buyers: the scales today are beginning to tip in your favor. Continental's production of fibre drums is greater this year than ever before. It's up over 1946, month by month—showing that our increased production facilities are at last making headway toward balancing supply and demand. Why not drop us a line or telephone our nearest office? You'll see what we mean when we say Continental offers the "*best* in service, *best* in quality."

Charmers

On the Champs-Elysees... Fifth Avenue . . . Wilshire Boulevard . . . Rowell adds exciting charm to cosmetic boxes for face and dusting powder.

Sleek, gay, and attractive, they catch the feminine eye and find their way into the tailleur of the most sophisticated.



precision color printing

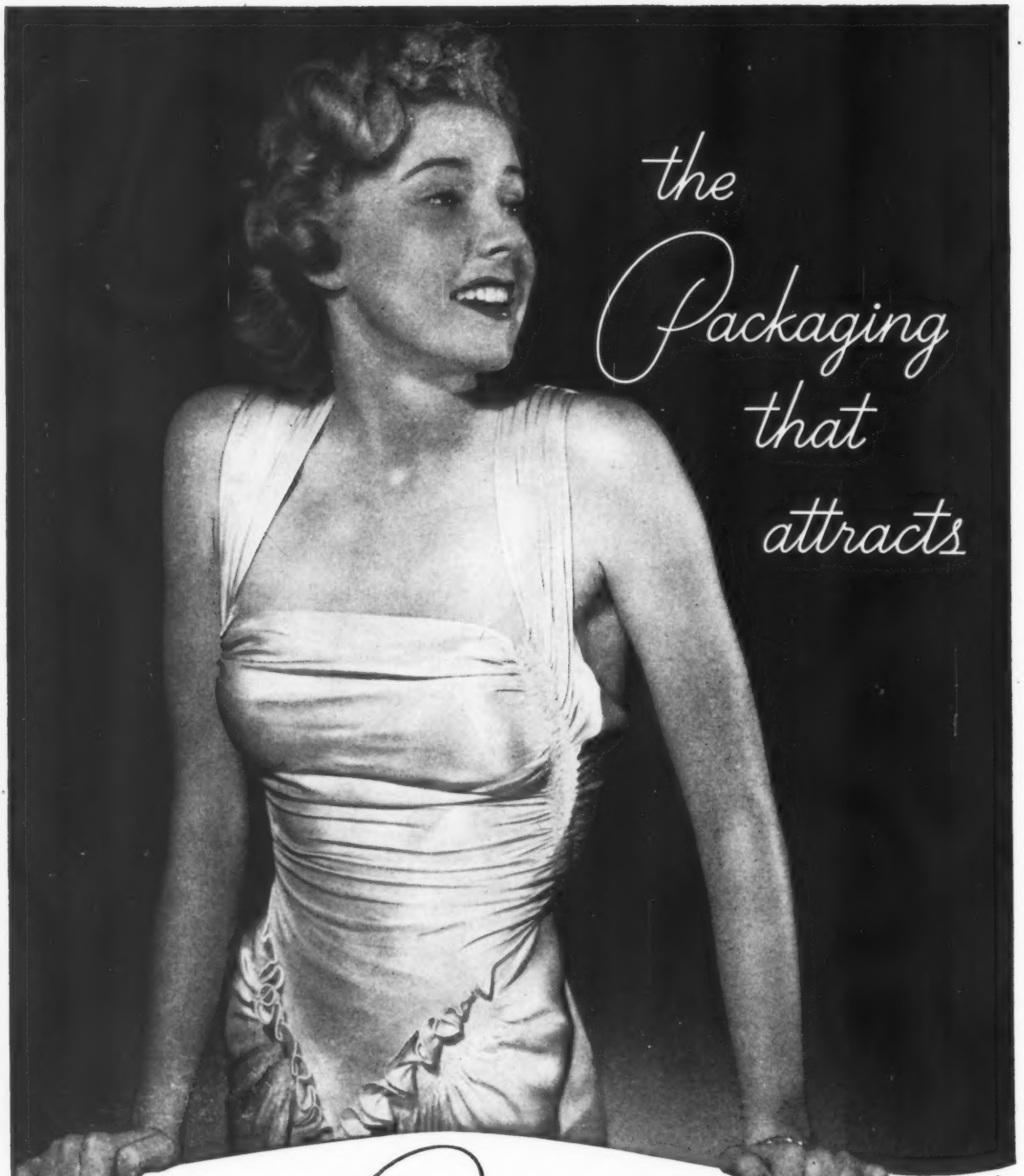
pharmaceutical boxes

50 years' experience

E. N. Rowell Co. Inc.

Manufacturers of Fine Paper Boxes

BATAVIA, N.Y.



Built into every Ace Carton creation are the characteristics of sound design and construction principles . . . and this is not accidental; it is the result of careful study and application.

The packaging that *attracts* is the packaging that *sells!*

ACE CHICAGO Creators

ACE CARTON CORPORATION

FOLDING PAPER BOXES • FOLDING DISPLAY CONTAINERS

5800 WEST 51ST STREET, CHICAGO 38, ILL. • TELEPHONE CRAWFORD 0111

Ribbons

packaging can be idealistic!

Flexible Pouch

in all the history of modern packaging

only facil•fab transforms the better

into ideal* merchandise!

contact facil•fab today!

Cylinders

*IDEAL MERCHANDISE is **facil-fab** wrapped packages with ultimate in consumer appeal . . . style-wise patterns . . . color choice . . . display value.*

facil-fab is laminated unwoven satin fabric and comes in four types, perfectly designed for their purposes.

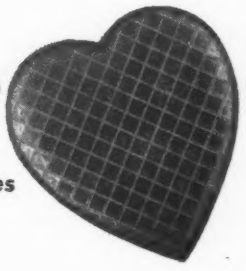
TYPE 1 — PLIABLE SATIN VINYLETT, stretchable and flameproof — for draping and covering.

TYPE 2 — LIGHT WEIGHT FOLDING, paper backed — can be glued, draped, stitched, printed — in hand or automatic manufacture. See production samples illustrated.

TYPE 3 — BOARD WEIGHT, backed with 13 pt. white board for display use.

TYPE 4 — SATIN RIBBONS, backed with Lumarith — makes brilliantly colorful, perfect gift ties.

Samples on request. Complete design service.



Candy Boxes

facil•fab

REG. U. S. PAT. OFF.

laminated fabrics

FACIL FABRICS CORP.

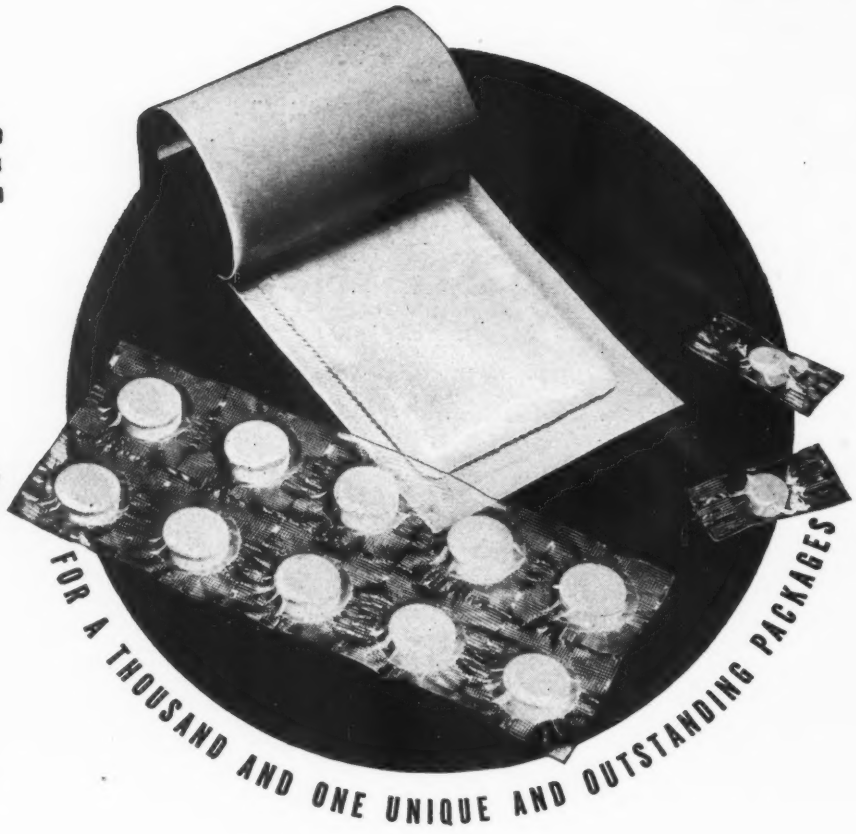
675 FIFTH AVENUE

NEW YORK 22, N. Y.

PLaza 9-6408

*SANITAPE--SEALTITE

Superior Packaging



THIS patented method of packaging pills, tablets, creams and liquids has never been equalled since its creation by us. The reason for this continued superiority of Sanitape-Sealtite is clearly indicated by consideration of the basic advantages.

PROTECTION is inherent in the method—sealing each unit or unit-dose in its own air-tight compartment affords the most complete protection known—protection not only against dirt, and germs, but against handling, breakage, moisture and changes of temperature.

CONVENIENCE is an obvious advantage of Sanitape-Sealtite—single units or unit-doses, wrapped singly for prescribed usage. The unit-packaged product is convenient to use, to carry (in vest pocket or hand-bag) to keep (in drawer or medicine cabinet).

ECONOMY of Sanitape-Sealtite packaging merits careful consideration—it is not only that less expensive packaging materials are used and that handling and shipping weights are greatly reduced—in addition you have the advantage of our Contract Packaging Service.

ATTRACTIVENESS is a powerful sales appeal—Sanitape-Sealtite has it. Clean, neat and crisp, it bespeaks an ethical attention to detail which is inviting and reassuring. This feature of Sanitape-Sealtite will afford an incalculable advantage in the competitive days ahead.

Consider one of the units above—Sanitape or Sealtite or Powder Package—think of it as a mailing sample, a dispensing sample or part of a standard-sale package of practically any capacity. Picture it packaged with a single cover, double cover, catch-board folder or in a container of almost any size or shape—then outline your problem and ask us for pertinent details. Sanitape-Sealtite Packaging is indeed Superior Packaging, and may play an important part in your future plans.

CONTRACT PACKAGING SERVICE in our 100,000 square feet of light, air-conditioned space, equipped with every modern labor-saving device, we have a capacity up to 8,000,000 units daily—this volume, together with our concentration on unit packaging exclusively, affords the manufacturer important saving, and relieves him of every packaging detail. Here we (a) Receive your product in bulk (b) Store in bonded ware-rooms (c) Package by Sanitape-Sealtite (d) Insert literature if desired (e) Return finished packages to you, or drop-ship according to your instructions. We act as *your packaging department.*

UNIT PACKAGING

IVERS-LEE COMPANY

NEWARK • NEW JERSEY

*Sanitape-Sealtite is a unique method for packaging pills, tablets, capsules, creams and powders, by which each unit or unit dose is sealed in its own air-tight compartment, assuring convenience, protection and maintained efficacy.

Packages, Methods, and Machinery fully covered by U. S. and Foreign Patents.

with **WIRZ** *Mono-Pak** single-use tube...

Flavors can be sealed in, moisture sealed out, exact dosage dispensed—with the easy-to-open WIRZ Monopak* single-use collapsible metal tube. Ideal for individual or sample units of coffee, dehydrated soups, pastes, hydroscopic powders and granular products. Contents remain fresh, pure. WIRZ Monopak* single-use tube is hermetically sealed, non-refillable. Requires no labeling or recapping. WIRZ Monopak* single-use tube may be the answer to your packaging problem. Let us explore its possibilities together.

*REG. U. S. PAT. OFF.

ESTABLISHED 1836

A. H. **WIRZ** *Inc.*

CHESTER, PA.

Export Division—751 Drexel Bldg., Philadelphia 6, Pa.

New York 17, N. Y. 50 E. 42nd St. | Chicago 4, Ill. 80 E. Jackson Blvd. | Memphis 2, Tenn. Wurzburg Bros. | Havana Cuba Roberto Ortiz Planos | A. G. Spilker Los Angeles 14, Calif. 1709 W. 8th St. Exposition 0178—Also Danville, Calif.

Collapsible Metal Tubes • Lacquer Linings • Wax Linings • Westite Closures • Soft Metal Tubing • Household Can Spouts • Applicator Pipes • Compression Molding

Here's good news!

IMMEDIATE DELIVERY

...on this cost-cutting automatic powder packager

Because of greatly increased production facilities, Triangle is now able to make immediate delivery on modern, cost-cutting model U-1 Packers. 15–25% faster than previous models, these new machines reduce operator fatigue and are extremely accurate and easy to clean. Here are the quick facts:

No pedals—*filling is automatic* once container is placed in position. . . Packing bowl can be quickly removed for cleaning by loosening three nuts, an especially useful feature when a machine is used for a variety of products. . . Packs into cans, bags, cartons, jars. . . Range 1 oz. to 5 lbs. . . Production 20 to 30 packages per minute. . . Height 83". . . Floor space 3′ x 3′.

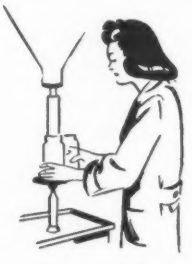
If you package powdered materials of any kind, it will pay you to write Triangle for complete data on this new Auger Packer.

NEW TRIANGLE MODEL U-1 AUGER PACKER

TRIANGLE PACKAGE MACHINERY CO.

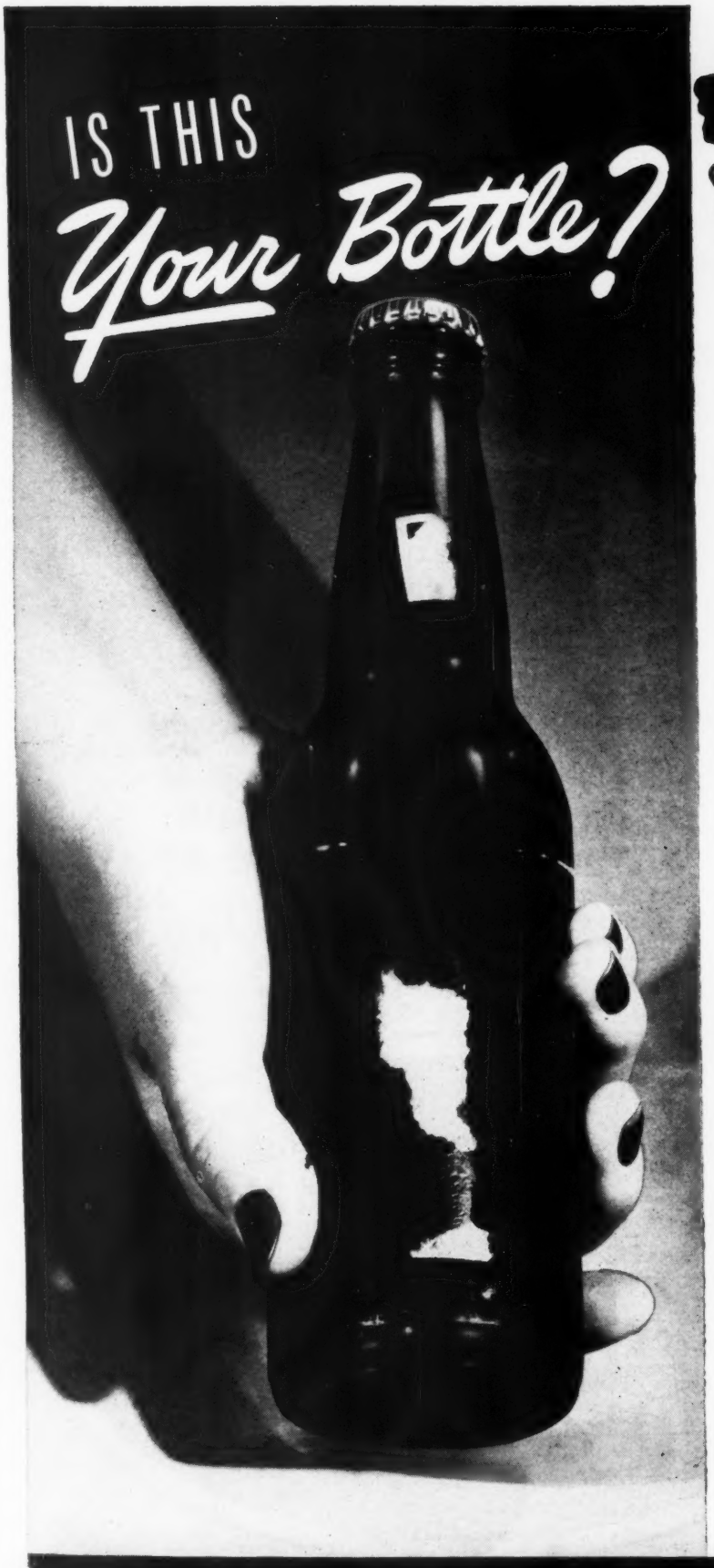
907 No. SPAULDING AVENUE, CHICAGO

1 Operator places empty container on packing platform which rises to filling position.



2 When container reaches filling position, filling starts automatically. Operator takes another empty container with right hand.

3 Filling stops automatically at predetermined amount. Operator replaces filled container with empty one and filling operation is repeated.



TEAR OUT—PASTE ON LETTERHEAD AND MAIL!

PAISLEY PRODUCTS INC. 1770 Canalport Ave., Chicago 16, Ill. 630 W. 51st St., New York 19, N. Y.

Please send me free laboratory report giving complete information about Paisley "Icestik" Ice-proof Bottle Labeling Glue.

FIRM _____

BUYER _____

ADDRESS _____

CITY _____ STATE _____

SWITCH TO *"ICESTIK"* FOR ICE-PROOF BOTTLE LABELING

WHEN they hand *your* bottle to a customer, *how does the label look?* After days in icy water, or dripping, damp mechanical coolers, is the label still intact? . . is it clean, smooth, untorn . . presenting your brand name and product to the best possible advantage?

Now, you can definitely *protect* your product against loose, torn or unsightly labels. "ICESTIK" . . the new Paisley Ice-proof Animal Base Bottle Label Glue . . has been developed to a degree of efficiency heretofore considered impossible! Now, plain, varnished, lacquered, or foil-backed paper labels can be neatly affixed to wet or dry bottles *at 132 per minute!* Labels hold tight for 7 to 10 days or more in water coolers and refrigerators yet can be easily removed in any standard multiple compartment washer. Clean working, odorless, "ICESTIK" can average 50,000 bottles to a gallon without stringing, feathering, webbing, or spitting. *It's the cleanest machining Ice-proof Label Glue you've ever seen!*

Test all the amazing new qualities of this better bottle labeling glue. Send your bottles to market confident that your labels will remain intact. The coupon above will quickly bring you *fact-filled* literature and trial shipment prices. For your own best interests, will you fill in and mail it now?

Paisley
SCIENTIFIC ADHESIVE SERVICE

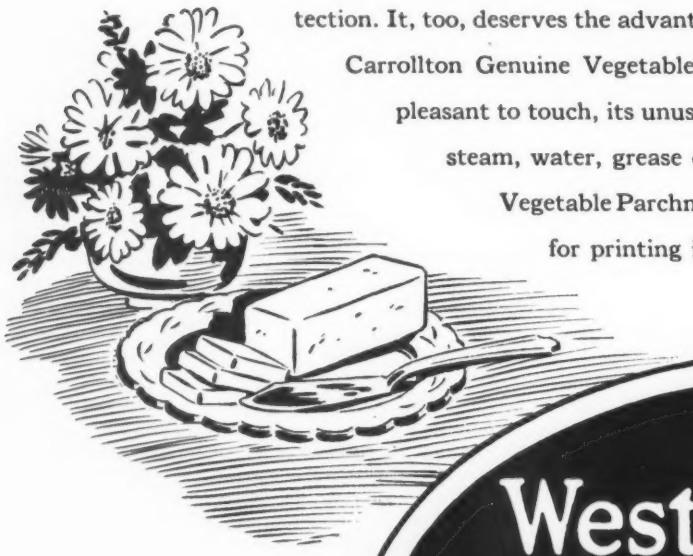
PAISLEY PRODUCTS INCORPORATED

Manufacturers of Glues, Pastes, Resin Adhesives, Cements, and Related Chemical Products

1770 CANALPORT AVE., CHICAGO 16, ILL., PHONE CANAL 2220 ★ 630 W. 51st ST., NEW YORK 19, N.Y., PHONE COLUMBUS 5-2860

From Dairy to Dinner—

Consumers demand that the savor of moist foods—butter, shortening, ice cream, cheese, poultry, meat and vegetables—be preserved in all its original freshness. Packers find this obligation most capably fulfilled by West Carrollton Genuine Vegetable Parchment. The natural flavor and consequent salability of *your* product will benefit by safe, pure, odorless protection. It, too, deserves the advantage of being wrapped in West Carrollton Genuine Vegetable Parchment. Attractive, smooth, pleasant to touch, its unusual strength is in no way hampered by steam, water, grease or frost. Ask for West Carrollton Genuine Vegetable Parchment. We have complete facilities in our own plant for printing in one or more attractive colors, using special inks.



West Carrollton GENUINE VEGETABLE Parchment

WEST CARROLLTON PARCHMENT CO.
WEST CARROLLTON, OHIO

RCA's Electronic Metal Detector used to speed final inspection of packaged candy

To eliminate any last element of chance from candy inspection, Peter Paul, Inc., Philadelphia, uses an RCA electronic metal detector to guard the high quality of its products.

If metal is detected, a gong sounds and the conveyor stops automatically. A nearby operator at a candy filling machine removes the package in question and presses the START button to resume normal operation.

SPOTS MAGNETIC AND NON-MAGNETIC METALS IN NON-METALLIC MATERIALS

This modern electronic equipment can spot every type of metal and alloy—magnetic or non-magnetic, regardless of its depth in the material. Reports on units in use for more than two years attest to its reliability—even in detecting particles as small as 70 thousandths of an inch in diameter! A plus benefit for the confectioner is the detection of carbonized sugar.

IDEAL FOR YOUR PRE-PACKAGING OR FINAL INSPECTIONS

Here's a unique opportunity to automatically safeguard the quality of your bulk or packaged goods . . . reduce lost production time . . . protect you against false claims of negligence . . . preserve customer good will. It will pay you to get complete information immediately. Write Dept. 118-J.

AUTOMATIC INSPECTION ON A CONVEYOR BELT

When metal is detected, hinged arm deflects the contaminated package into the reject bin.

AUTOMATIC INSPECTION ON A CHUTE

When metal is detected, the hinged vane (A) rises and rejects the contaminated package.

RCA

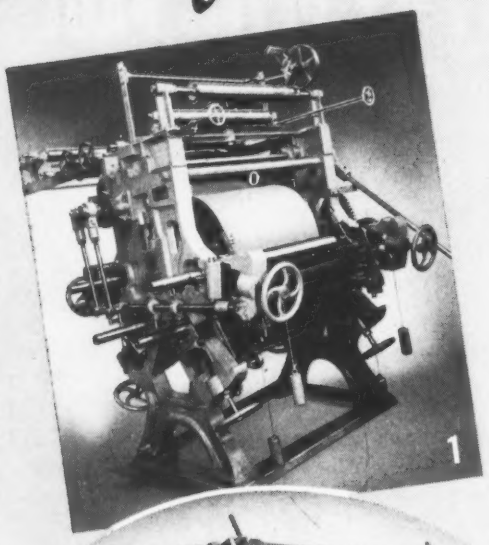
INDUSTRIAL ELECTRONICS

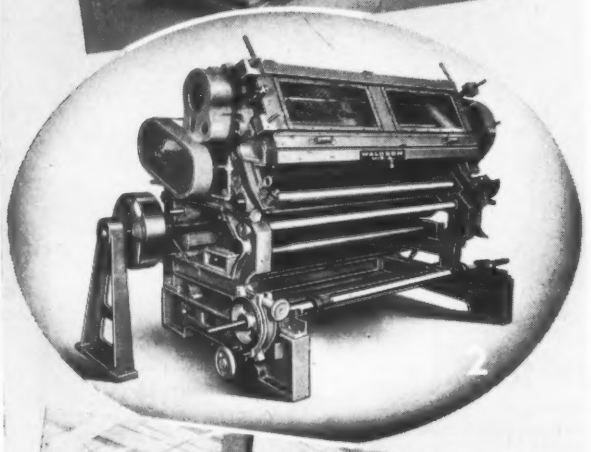
RADIO CORPORATION of AMERICA

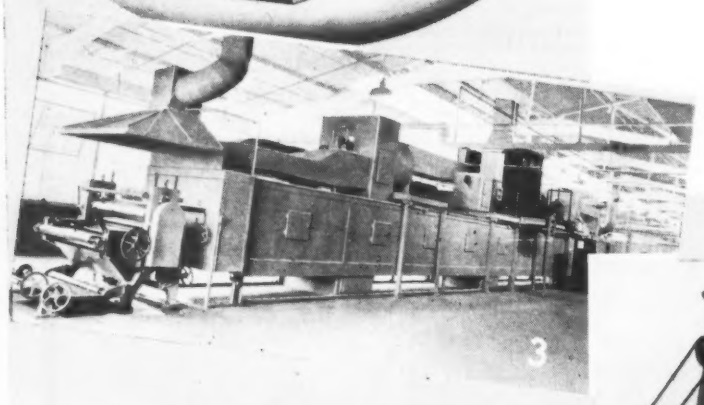
ENGINEERING PRODUCTS DEPARTMENT, CAMDEN, N.J.

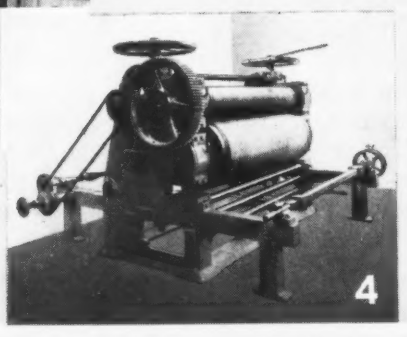
In Canada: RCA VICTOR Company Limited, Montreal

Part of the Picture of Famous Packages









1 Waldron 6 Color Engraved Roll Printer.

2 Waldron Reverse Roll Coater.

3 Waldron Machine Line for Plastics Treating.

4 Waldron Centennial Embossing Machine.

WALDRON MACHINES

For every step in your material processing, from raw stock to finished product, WALDRON can supply the right machine. The more beautiful and durable packaging materials are processed on WALDRON machines.

ANILINE PRINTING MACHINES
ROTARY PRINTING MACHINES
COATING MACHINES
CREPEING MACHINES
EMBOSSING MACHINES
GUMMING MACHINES
LAMINATING MACHINES
PAPER ROLLS (EMBOSSING)
SATURATING MACHINES
SLITTING MACHINES
WAXING MACHINES
WINDING MACHINES
SPECIALLY DESIGNED MACHINES

WALDRON Machines have provided the basic idea for scores of remarkable new products and effects. The experience of our Research and Development Staff and the facilities of our Testing Laboratory are at your service.

JOHN WALDRON CORP.

Main Office & Works – NEW BRUNSWICK, NEW JERSEY

CHICAGO - 6
201 N. WELLS ST.

NEW YORK - 17
350 MADISON AVE.

BOSTON - 9
79 MILK ST.

BUILDERS OF QUALITY MACHINES SINCE 1827

NEW, COST-SAVING

STANDARD SIZES

FOR CELLOPHANE BAGS...

PIONEERED BY DOBECKMUN

Users of plain or printed cellophane bags can make substantial savings, up to 15% in the most popular sizes, by utilizing the new, exclusive, economy program developed by The Dobeckmun Company.

260 sizes available in moisture-proof, heat-sealing cellophane

Single-wall, square bags are offered in eight width and depth combinations, in lengths from 7″ to 15″, in ¼″ variations. Detailed surveys prove that these 260 sizes approach closely the sizes of higher-priced "specials", at lower cost and without changing packing methods. Standard Size bags can be obtained unprinted or printed in one, two or three colors.

While geared to moisture-proof, heat-sealing DuPont cellophane, other film types may be used to suit users' conditions.

Even higher quality at lower prices

In every respect, Dobeckmun Standard Sizes maintain our reputation for quality, appearance, materials and workmanship. The economies we offer you are made possible by new, faster machinery and by maintaining high-quantity production without costly down time for changes required by special sizes, shapes and materials. We have cut our costs on Standard Sizes . . . and we share these savings with our customers.

Continued Dobeckmun service on other bags and packages

The Standard Size program sacrifices none of our facilities for custom-made, plain or attractively printed bags. We continue to supply stock satchel, Standrite or special bags; and to design and process films and foils into sales-producing packages.

Compare your costs

In the face of rising and peak prices of every cost factor, Dobeckmun Standard Sizes offer substantial savings. Send us your bag samples or sizes for analysis and quick quotations.

THE DOBECKMUN COMPANY

Cleveland 1, Ohio

West Coast Division, Berkeley 2, California

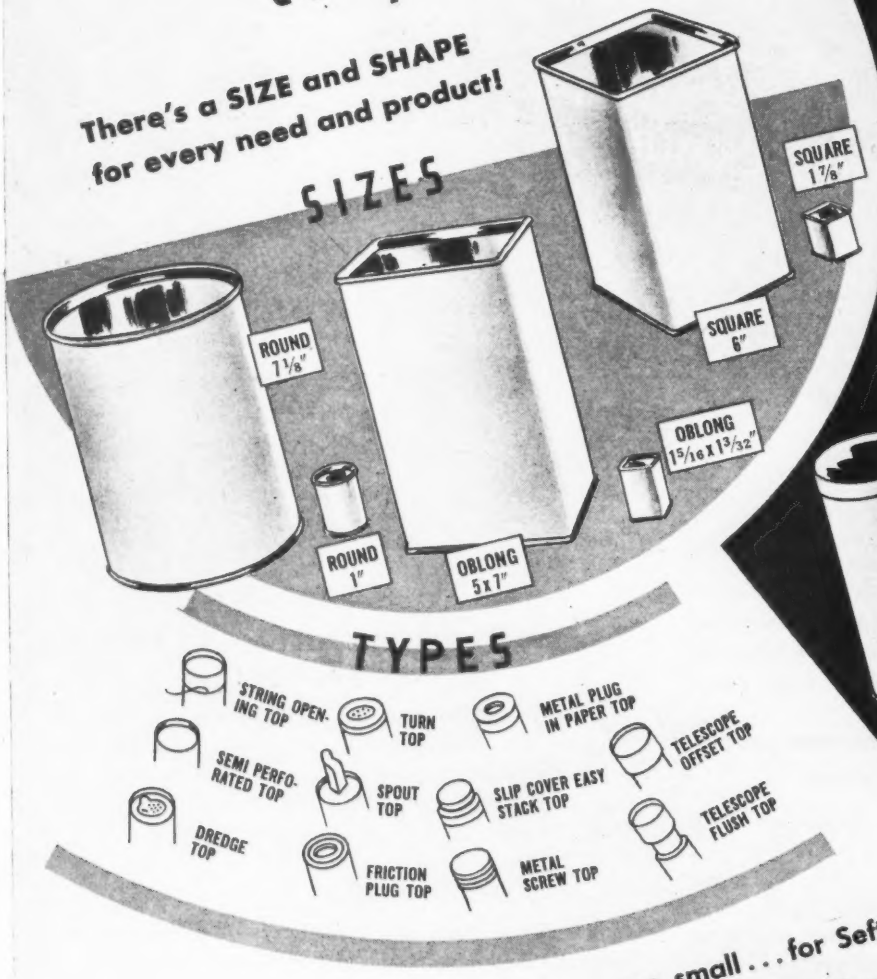
DOBECKMUN

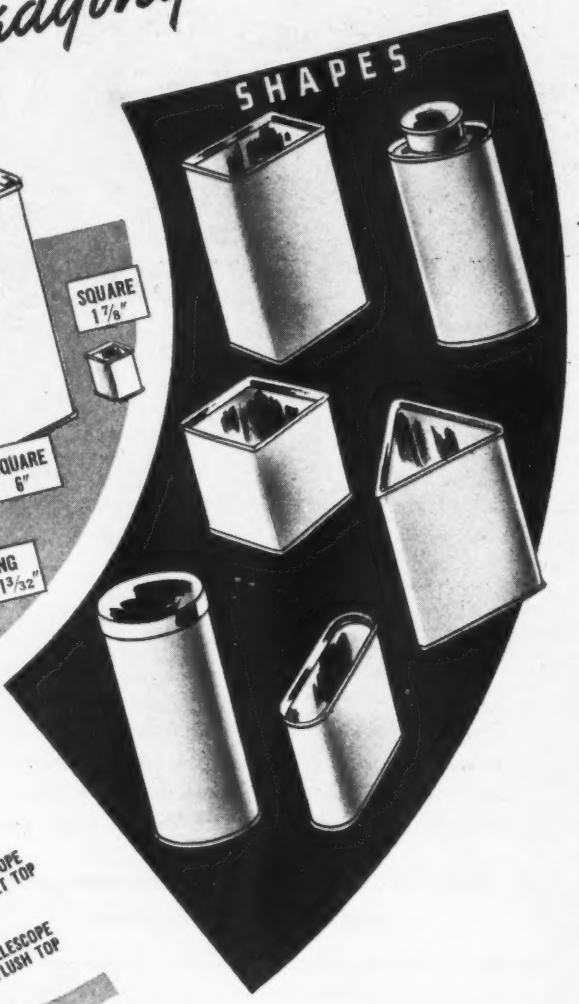
Self-selling packages in processed films and foils

Branches in: Boston, Chicago, Cincinnati, Los Angeles, New York, Philadelphia, San Francisco and Seattle. Representatives everywhere.

SEFTON has the ANSWER to your *Packaging Problems!*

There's a SIZE and SHAPE for every need and product!





There's no job too big . . . or too small . . . for Sefton! Whatever your packaging problem, Sefton Fibre Can Company is tooled to do the job for you! There's a shape . . . a size . . . and a top to fit your product's specific needs. Let Sefton designers help you solve your packaging problems!

Sefton FIBRE CAN COMPANY

ST. LOUIS . . . . . NEW ORLEANS

DISTRICT OFFICES: • Los Angeles • San Francisco • Denver • Dallas • Chicago • Des Moines • New Orleans • Boston • Detroit • Kansas City • St. Paul • Omaha • New York • Cincinnati • Cleveland • Oklahoma City • Pittsburgh • Memphis • Nashville • Houston • Salt Lake City • Seattle

Today's shopper doesn't like to play "hide and seek"

The product that quickly shows its value at the point of sale appeals to today's efficient shopper. In addition to telling her what she wants to know about size, color, quality, price, etc., it often reminds her of a need or suggests a use—rings up the impulse sales that account for 38 per cent of purchases in super markets according to a recent survey.

Alert retailers throughout the country are realizing more and more the sales power of visibility; are prone to give Cellophane packaged products the preferred display spots. E. I. du Pont de Nemours & Co. (Inc.), Cellophane Division, Wilmington 98, Delaware.

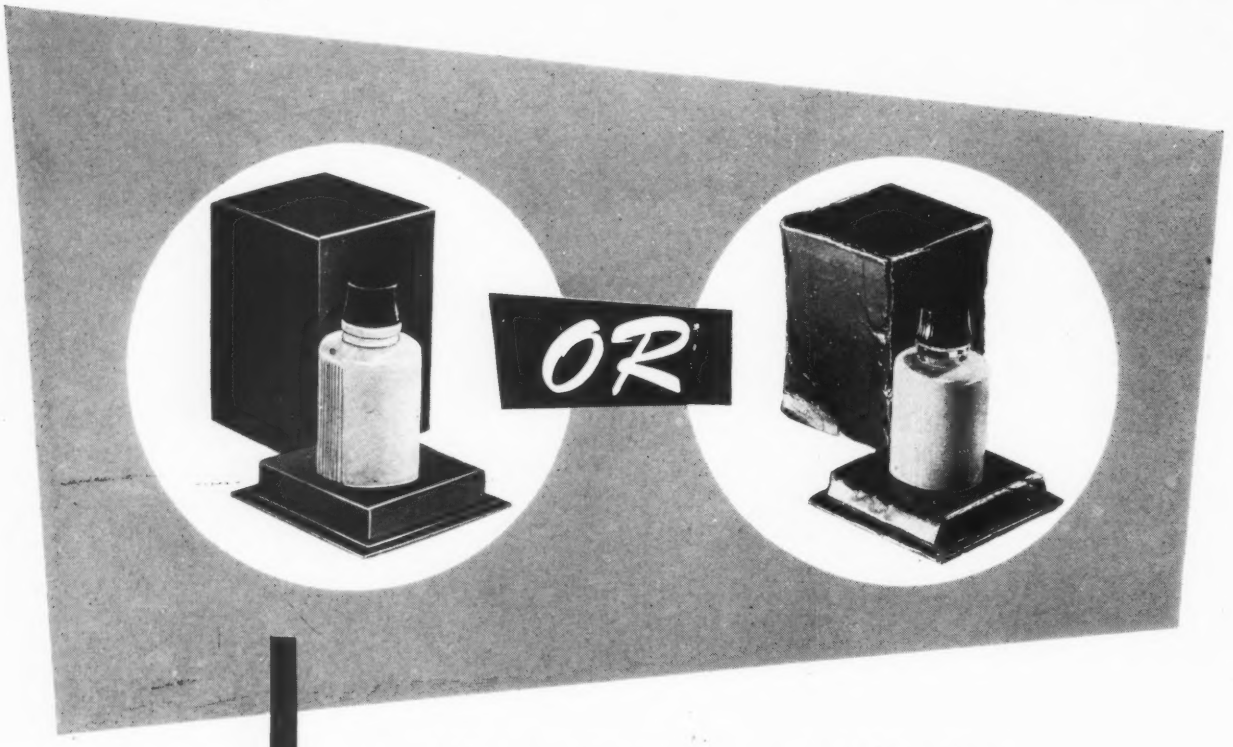
DuPont Cellophane

Shows what it Protects—at Low Cost

BETTER THINGS FOR BETTER LIVING ... *THROUGH CHEMISTRY*

DU PONT

REG. U. S. PAT. OFF



Agreed that a paper box can't be better than the board from which it's made? Then Butterfield-Barry is your logical source of paperboard supply for fine set-up or folding boxes.

Here are solid reasons:

RELIABILITY

For 95 years we have been in the *one* business of making and marketing quality boxboard.

KNOWLEDGE

The packaging industry and Butterfield-Barry grew up together. Naturally, we've accumulated a fund of experience in practical board-making that's hard to beat.

SERVICE

You've heard of our reputation in this respect. It's the guiding, century-old policy of the company.

SPECIALTIES

Each item in stock ranks high in eye appeal, physical characteristics, and workability. ROYAL SATIN is the acknowledged aristocrat of set-up boxboards, while TREDONIA lined board heads the list for moisture and grease-proof packaging.

SHEET LINING

The most modern lining equipment in the industry. Book, News and Special Papers. DOUBLE LINING done in one operation on our own specially designed equipment.

OTHER PRODUCTS

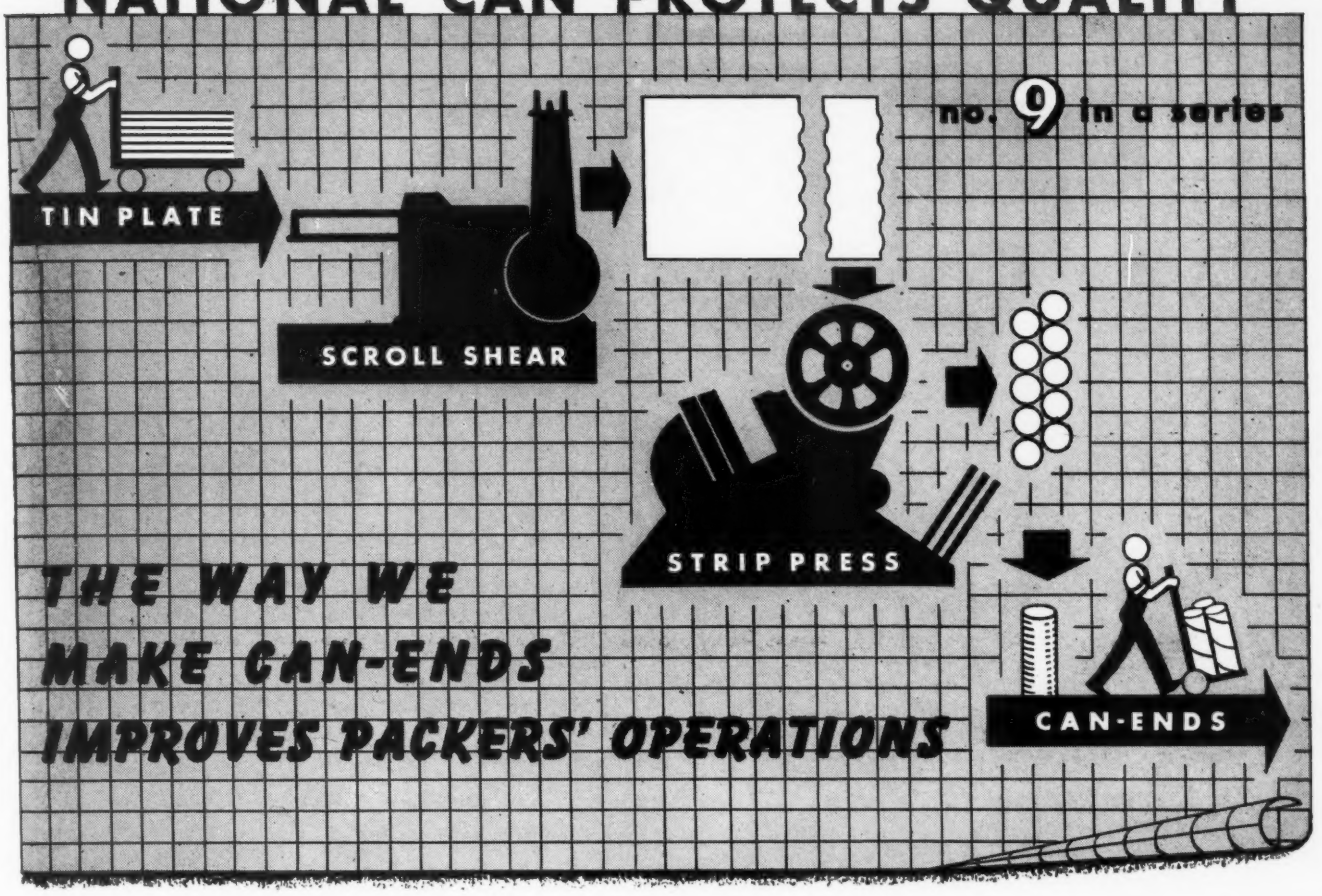
Set-Up Boxboard, Folding Boxboard, Binder's Board, Tube Stock, Kraft Paper, Specialties.

THE BUTTERFIELD-BARRY CO., INC.

The Oldest Name in Boxboard

174–178 HUDSON STREET • NEW YORK 13, N. Y.

NATIONAL CAN PROTECTS QUALITY



To safeguard your product's quality and to improve your plant's operation, National Can Corporation does not stop at the air testing of the cans described in Number 8 of this series. The part of the can to be used last — the can-end for the can's top — is given the same care and handling as the can body receives.

Smoother work with fewer rejects at your double seamers is made possible by the extremely close tolerances maintained during National Can's end forming operations at scroll shears and presses. And the way National carries out compound lining and drying helps assure tight closing.

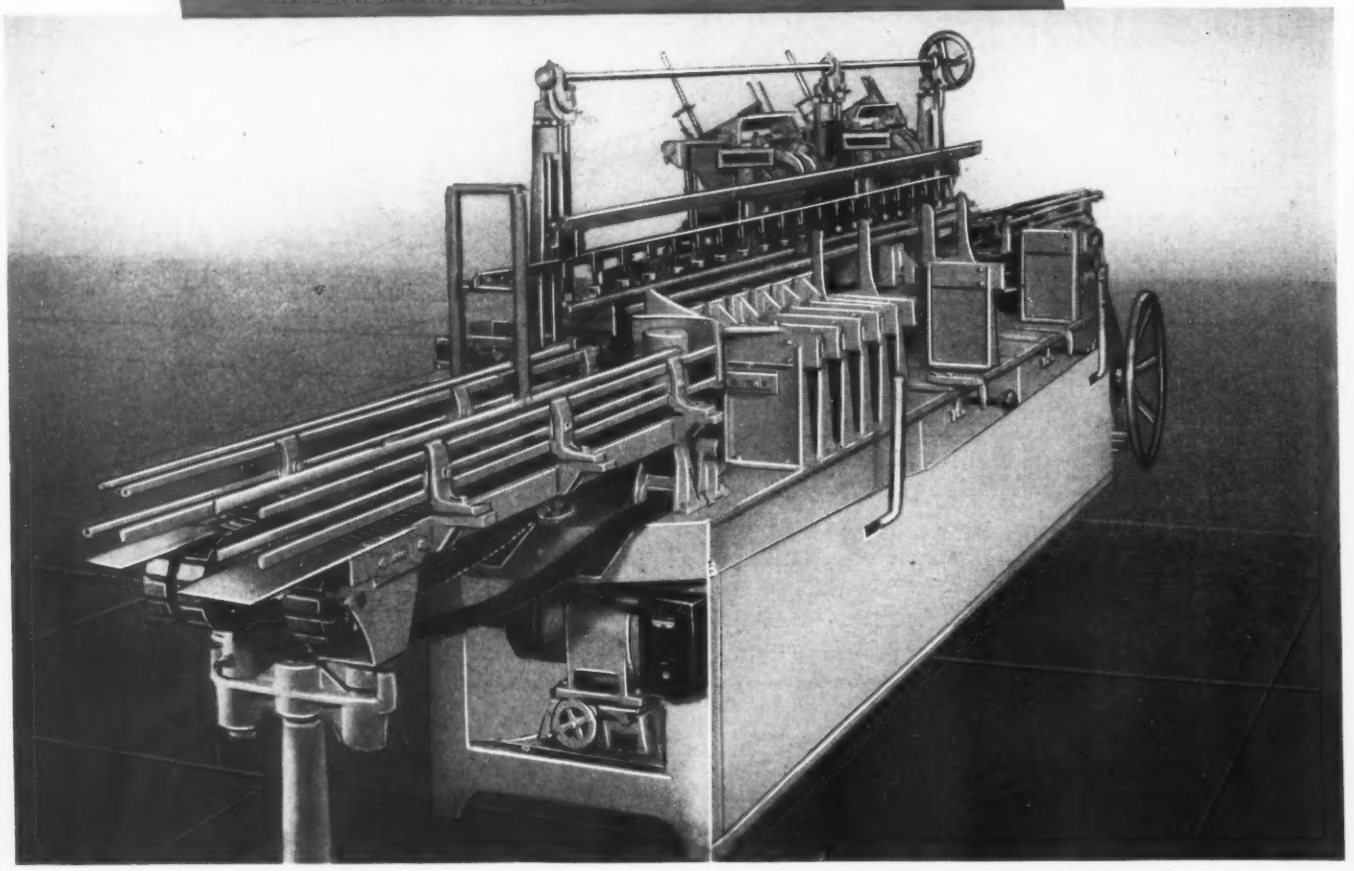
There's easier stacking at your double seamers, too, because of the way top ends are packed and shipped by National Can. This makes use of specially-wound tubular cartons which prevent can-ends from getting loose and damaging each other in transit.

NATIONAL CAN
CORPORATION

Executive Offices: 110 EAST 42nd STREET, NEW YORK 17, N. Y.

SALES OFFICES AND PLANTS IN: BALTIMORE, MD. · CHICAGO, ILL. · HAMILTON, OHIO · BOSTON, MASS. · INDIANAPOLIS, IND. · MASPETH, N. Y. · CANONSBURG, PA. · ST. LOUIS, MO.

A FOUR-WAYS-BETTER WORLD



Single or Twin

The Model 65 Single Station BEE-LINE and the Model 120 Twin Station BEE-LINE gives you the production you want at the most efficient labeling speed. They are interchangeable as to container sizes, parts and attachments.

4 Starting Levers

Starting and stopping the BEE-LINE is most convenient for the operator.

3 Wiping Applications

Before the container leaves the BEE-LINE it receives *three* controlled pressure wiping applications; that's 50% greater wiping capacity. Smooth, firm, clean labeling is assured.

Led, Not Pushed

A new drive for the overhead bottle grips leads the containers gently through the WORLD BEE-LINE Labeler — gently but steadily, without traffic jams or detours.

Ask us to tell you more about WORLD BEE-LINE Labeling and what it means to you

"YOU GET THE BEST LABELERS IN THE WORLD"

ECONOMIC MACHINERY COMPANY

Builders of World Automatic and Semi-Automatic Labelers for Every Purpose

WORCESTER, MASSACHUSETTS

New York Philadelphia Pittsburgh Chicago San Francisco Denver
Louisville Salt Lake City El Paso Seattle Portland Phoenix London
Montreal Toronto Winnipeg Newfoundland Vancouver Mexico City
Sydney, Australia Wellington, N.Z. San Juan, P.R. Cuidad, Trujillo. D.R.

Brisk autumn evenings step up the call for hot chocolate as a favorite drink . . . and it's better than ever when it's Sweeco Chocolate topped off with a generous spoonful of Marshmallow Fluff . . the light creamy marshmallow that adds new zest to dozens of dishes.

Fluff is another on the long list of products sealed with Crown Screw Caps. The manufacturers, Durkee-Mower, Inc. of Lynn, Massachusetts, know that the uniformity of Crown Screw Caps means trouble-free application on the production line and exceptional sealing dependability. Every Crown Cap is made to carefully controlled tolerances. Liners are rigidly held to full specified thicknesses and manufactured of materials developed for their sealing efficiency on specific products. Deep Hook Thread construction, an exclusive Crown feature, gives greater sealing pressure with any given amount of application force. For all around sealing satisfaction, you can't go wrong on Crown Screw Caps.

Crown Cork & Seal Co., Baltimore 3, Md. *World's Largest Makers of Metal Closures.*

CROWN CLOSURES

WEIGHTROL INDICATES.

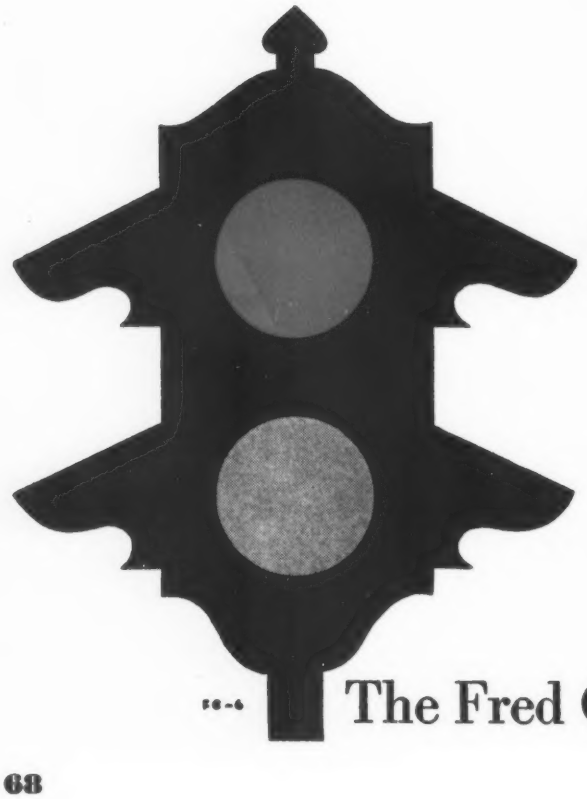
Amber means overweight; green, "O.K."; and red, underweight. From anywhere on the packaging floor you can check filling machinery performance at a glance. You can save by re-setting filling machines the moment weight varies.

WEIGHTROL REJECTS.

Unders and overs can't get past Weightrol, if set for rejection. Give-away is cut and no underweights can slip by.

WEIGHTROL RECORDS.

Counters show number of packages checked in each classification.



STOP

off weight packages

the new automatic weight indication and control device for package filling machines reduces give-away to absolute minimum

58-6

The Fred Goat Co., Inc. ESTABLISHED 1893 DEPT. M. P.
216 DEAN STREET, BROOKLYN 17, N. Y.

She'll Remember

A PLASTICS PACKAGE HAS *RE-USE VALUE!*

● *Right away* you see more than sales appeal in this beautiful package *by Amos.* It becomes an exquisite chest—always a reminder *to remember* the packager!

The skill with which Amos reproduced the antique appearance of hand-carved ivory *will interest you especially.* Amos engineers designed the molds, produced them . . . and maintained quality control over production *every step of the way.*

Your plastics package *by Amos* gets experienced supervision. We're injection molding specialists . . . with complete facilities to serve you best. Write *without obligation.*

Amos did it . . . RIGHT!

Faithful reproduction of oriental craftsmanship and low cost were important to Alden Plastics Corp., 5th Ave. Bldg., N. Y.

Extreme care and ingenuity were used by Amos to eliminate *all* signs of modern high-production molding.

This is the second time this Eastern packaging specialist has come to Amos—again Amos did it . . . *right!*

Designed by R. W. DAILEY, *Eastern Representative*
Engineered by J. C. KAZIMIER, *Amos Chief Engineer*

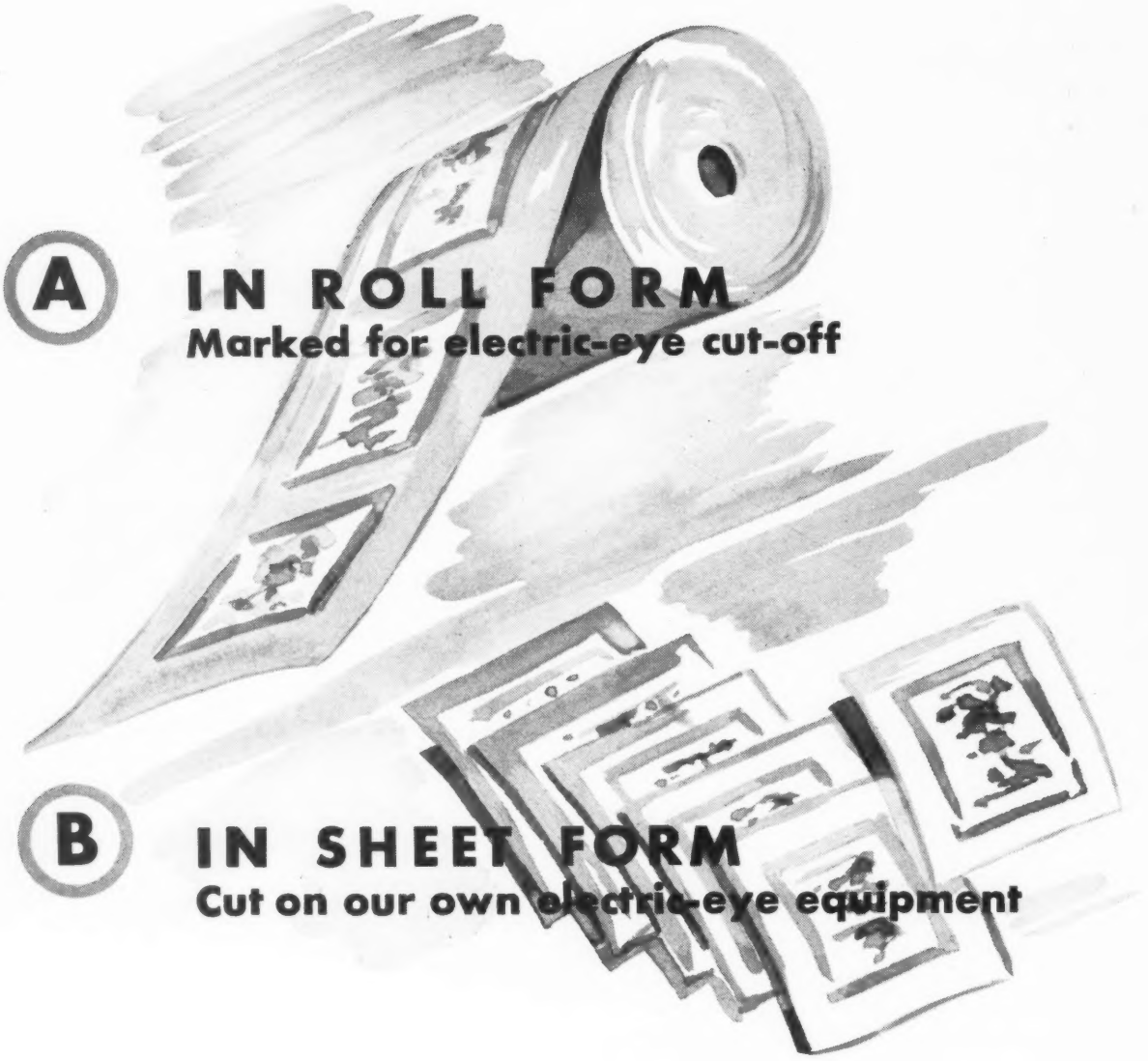
Request your copy of the new Amos catalog soon to be published. It illustrates how our sales and engineering facilities are organized . . . and why you'll get the best service *at Amos.*

AMOS MOLDED PLASTICS
Edinburgh, Indiana
Division of Amos-Thompson Corporation

Amos
MOLDED PLASTICS...
Custom Molders
Plastic parts and products
Injection Molding Specialists

AMOS *Quality Control* MEANS REAL SATISFACTION

LAYOUT PRINTED PAPERS



A **IN ROLL FORM**
Marked for electric-eye cut-off

B **IN SHEET FORM**
Cut on our own electric-eye equipment

Paper of this type may be printed to any repeat up to 36 in. wide and in one, two, three, or four colors by gravure. Dress up your packages by having the layout printing an integral part of the overall design. Your inquiry is invited.

DECOTONE PRODUCTS

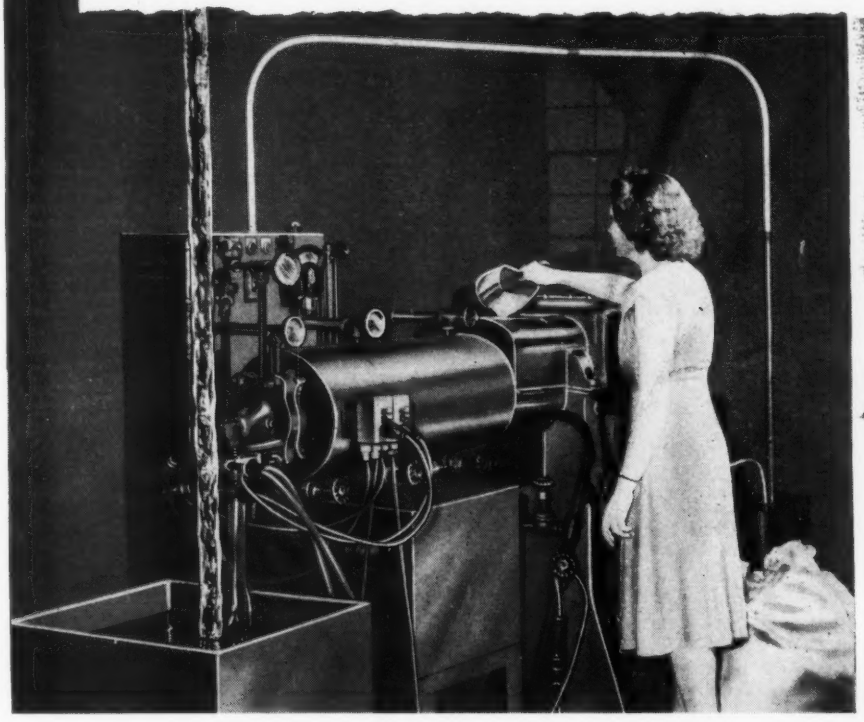
DIVISION

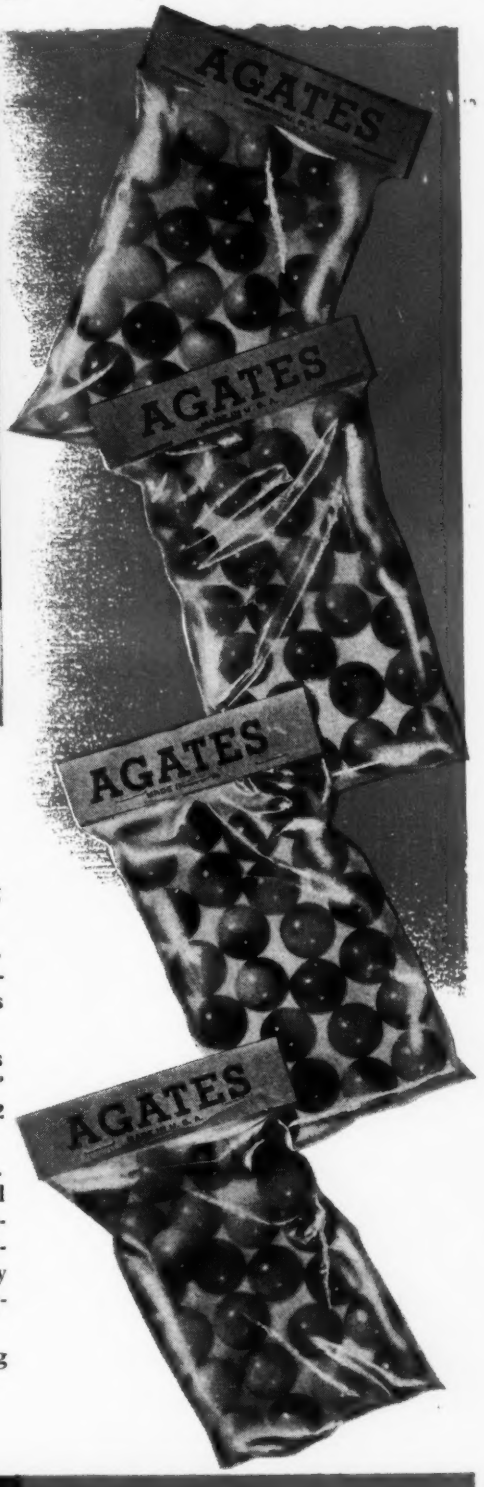
Fitchburg Paper Company

PACKAGING PAPERS *Converted Papers* SPECIALTY PAPERS

FITCHBURG, MASS.

Show windows for the *World's Fastest Selling* MARBLES





Continuous production of thin-wall tubing from a NRM extruder in the Vitro-Agate Plant, Parkersburg, West Va. Requiring a minimum of labor, production is fast, practical and economical.

• Everyone likes to see what they are buying. Youngsters buying marbles are no exception.

In deciding to use transparent plastic containers for their products, Vitro-Agate Company, Parkersburg, W. Va., needed a thin wall material in tubular form, in big volume quickly, to meet their requirements of as many as 60,000 bags a day.

As the world's largest producers of marbles, Vitro-Agate products are shipped around the world. Because of this and the many "handlings" the marbles receive, the package, an extruded polyethylene tube, .002 wall thickness, had to be strong, flexible and durable.

A single 2½" NRM extruder is meeting daily production needs. Vitro-Agate will tell you the extrusion is held to close tolerance and uniform appearance . . . there's no wasted material because the bag sections are cut and flame-sealed in a dual automatic operation. This successful use of NRM Extrusion Equipment should suggest to many, many other producers of a wide variety of products, a means to better packaging at lowered costs.

For equipment specifications to meet *your* needs, write the leading manufacturer of plastics extrusion equipment.

NATIONAL RUBBER MACHINERY CO.
General Offices: AKRON 8, OHIO

Plastics
MACHINERY DIVISION

Export Distributors: **OMNI Products Corporation, 460 Fourth Ave., New York 16, N. Y.**

Do your wrappers have these advantages?

Patapar has them ALL

WET-STRENGTH:

With Patapar* Vegetable Parchment you get a wrapper that can take any amount of wetting and like it. Patapar stays intact and strong even when boiled.

When moist foods are wrapped in it, Patapar gives lasting protection.

GREASE-PROOFNESS:

When Patapar comes in contact with grease, fats or oils it resists penetration. Products like butter, bacon, shortening, fish are kept fresh in it.

NO ODOR:

Patapar is pure of texture. Has no odor. It doesn't cause "off" flavor in foods.

NO TASTE:

Patapar doesn't impart a "papery" taste to things that are wrapped in it. It's tasteless.

BEAUTIFUL PRINTING:

Patapar wrappers can be printed beautifully with brand names and colorful designs. We do the printing in our own plants which are specially equipped for printing Patapar economically in one or more colors.

*Reg. U. S. Pat. Off.

Here's something else you get when you use Patapar

When you order printed Patapar we'll include the Keymark at no extra cost. The Patapar Keymark is the nationally advertised symbol of wrapper protection. When women see it on a wrapper it reminds them the product inside is well protected.

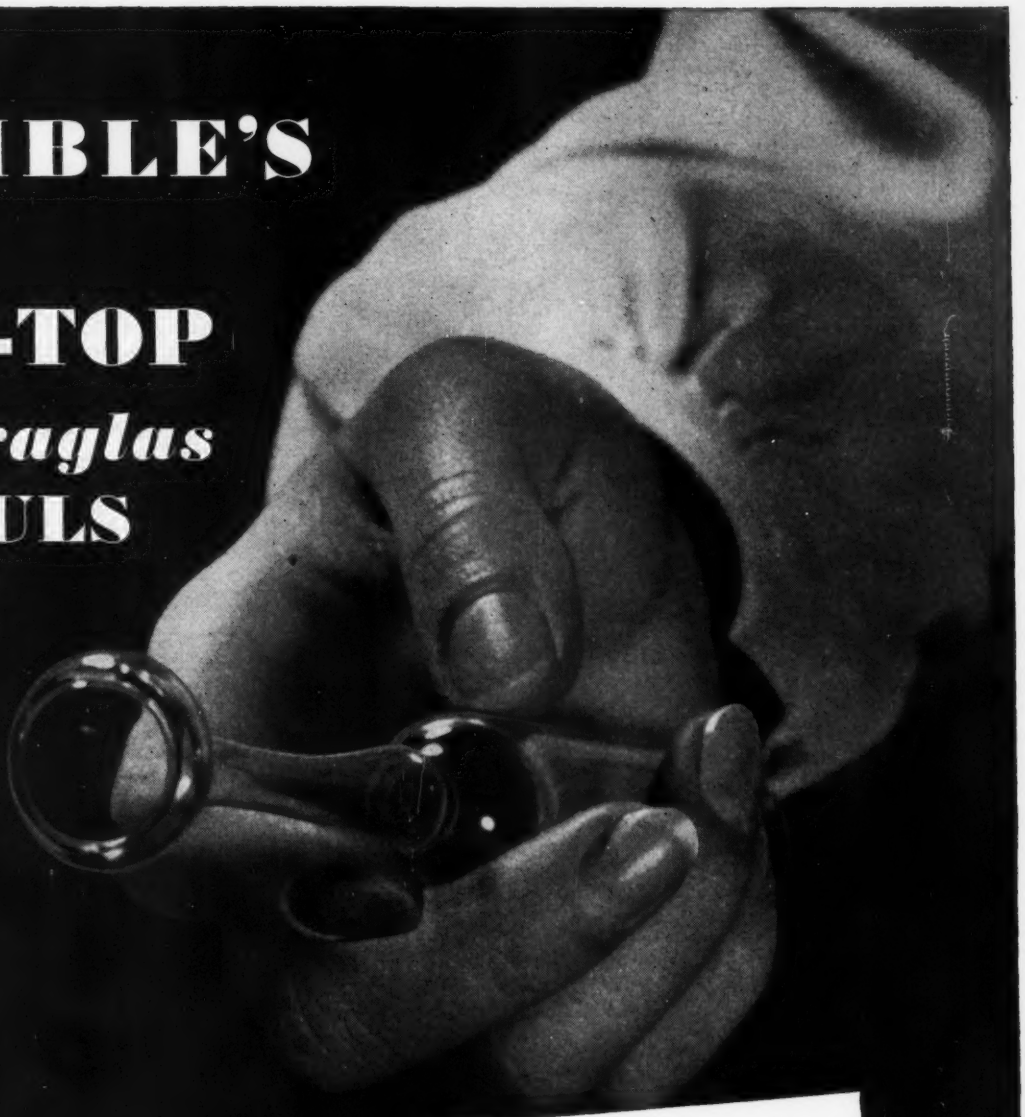
Paterson Parchment Paper Company • Bristol, Pennsylvania

Headquarters for Vegetable Parchment Since 1885

WEST COAST PLANT: 340 BRYANT STREET, SAN FRANCISCO 7, CALIFORNIA

BRANCH OFFICES: 120 BROADWAY, NEW YORK 5, N. Y. • 111 WEST WASHINGTON ST., CHICAGO 2, ILL.

KIMBLE'S
New
TUF-TOP
Neutraglas
AMPULS



FEATURES

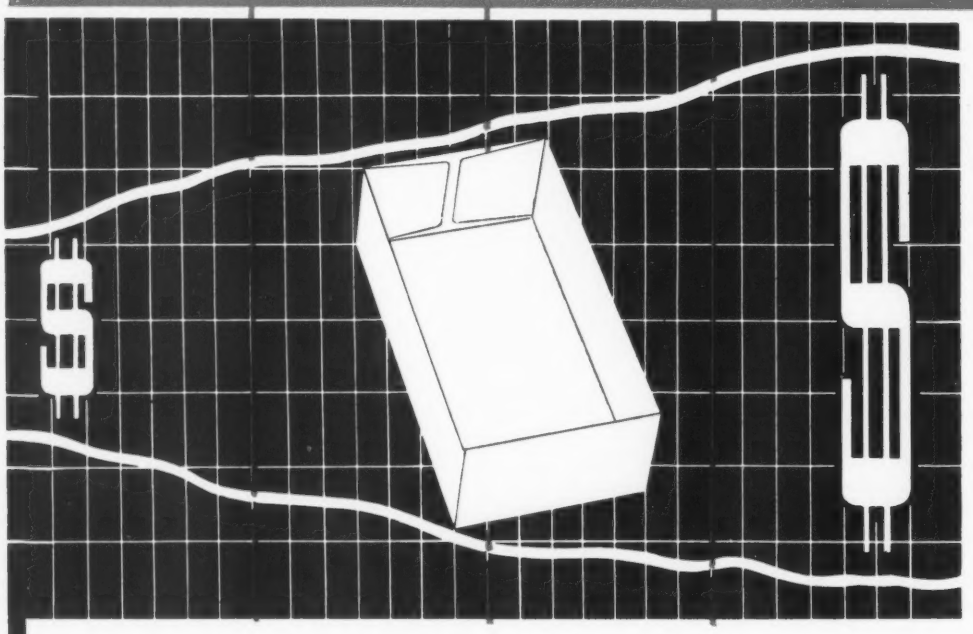
- NO CHIPS
- Handier Sealing
- Easy Entry of Needle
- Steady Racking

KIMBLE GLASS

The Visible Guarantee of Invisible Quality

Toledo 1, Ohio

DIVISION OF OWENS-ILLINOIS GLASS COMPANY

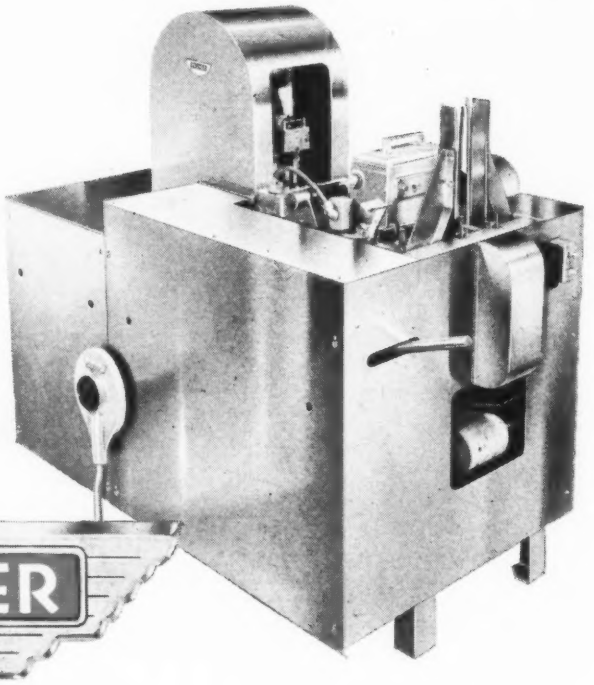


REDUCE YOUR CARTON SET-UP COST...

This New Palmer Machine Folds and Sets Up Glued Cartons at New High Speeds

Today's demands for increased speed and greater all-'round packaging efficiency are met with this new Palmer Carton Set-Up Machine. It is designed for volume use, with a top production rate on some sizes of 155 per minute.

This Palmer machine is a standard item, engineered to be assembled to set up almost any cartons with turned over side flaps or attached covers—or a combination—for packaging many kinds of products.



Whether you buy or make your own cartons, we invite you to request complete details to determine exactly what savings are possible.

PALMER
CHICAGO

FRANK D. PALMER, Inc.

528 North Western Avenue, CHICAGO 12, ILLINOIS

DESIGNERS AND BUILDERS OF SPECIAL MACHINERY

To capture her imagination . . . enduringly . . . there is no substitute for captivating packaging. Packaging which says, "I'm lovely . . . I'm yours, take me home with you!"

Such is packaging designed by Warnercraft . . . for in Warnercraft's experience there is craftsmanship and quality to fit your every packaging need. Choose the best . . . choose Warnercraft.

WARNERCRAFT

"THE FINEST WORD IN PACKAGING"

THE WARNER BROTHERS COMPANY

Makers of set-up and folding boxes of all types, transparent acetate containers, hand made specialties, counter displays and dispensers.
Main Office and Factory: 325 Lafayette Street, Bridgeport 1, Conn. • New York Sales Office: 200 Madison Avenue, New York 16, N. Y.

CARR-LOWREY CONTAINERS

Gems OF THE GLASSMAKER'S ART . . .

Manufacturers of quality perfumes and cosmetics can bring the designs for their highly distinctive containers to Carr-Lowrey with complete confidence. Fifty-eight years of experience in working with unusual designs has enabled us to develop the skills and facilities that permit the manufacture of fine glass containers within a commercial price range.

CARR-LOWREY GLASS CO.

Factory and Main Office: BALTIMORE 3, MD. • *New York Office:* 500 FIFTH AVENUE (18) • *Chicago Office:* 1502 MERCHANDISE MART (54)

OPAL JARS • HANDMADE GLASS BOTTLES • MACHINE MADE FLINT GLASS BOTTLES

The instructions read, "Place the contents of this package in . . ." It's as easy as that. No measuring. No unused portion to deteriorate. But how can you wrap up a spoonful, keep flavor in, keep moisture out, keep costs in line? That's easy, too. Packages of heat-sealed Alcoa Aluminum Foil do the trick.

Today you will find on dealers' shelves hundreds of food, drug and chemical products securely sealed in Alcoa Aluminum Foil. Open any one of them. You will find the contents as fresh as the moment it was packed. *Aluminum Foil provides greater protection against transfer of moisture, air or grease—despite heat, cold and time—than any other flexible packaging material in common use.*

Versatile Alcoa Foil is adaptable to almost every type and size of package. It may be bonded to paper, cloth or synthetic sheets. Its sparkling appearance may be enhanced by embossing or colorful printing. Leading package manufacturers will be glad to work with you in planning better packages using Alcoa Foil. For their names, write to ALUMINUM COMPANY OF AMERICA, 2129 Gulf Building, Pittsburgh 19, Pennsylvania. Sales offices in leading cities.

MORE PEOPLE WANT **MORE** ALUMINUM FOR **MORE** USES THAN EVER

ALCOA ALUMINUM FOIL

THE QUALITY PACKAGING MATERIAL FOR QUALITY PRODUCTS

Selected by the New York Museum of Modern Art for inclusion in its exhibit of "100 useful objects of fine design for 1947".

PREMIUM PERFORMER IN THE ALL-AMERICAN BOWL GAME

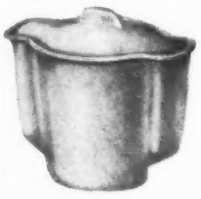
● A PREMIUM ● A PACKAGE
● PREMIUM and PACKAGE COMBINED

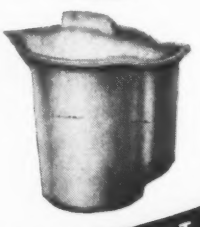
TRIPLE-THREAT PERFORMERS in the field of Premium Packaging, Tupper Products give *your* product stand-out eye appeal on store shelves. They *carry your product* into the home. And, they *keep your name* constantly before the consumer.

Just look at these typical members of the star-studded Millionaire Line-up! Made of sensational Poly-T, Material of the Future. Available in six soft pastel shades — Lime, Lemon, Orange, Pink, Blue, Snow-white.

● BIG BOY IN THE TUPPER LINE-UP

— is this full 1½-quart capacity Poly-T Tupper Pitcher. Exclusive, easy-grip handle, non-drip spout, convenient cover with hammered-aluminum handle. Tasteless, odorless, non-toxic — perfect for milk, water, fruit juices, for any soft or alcoholic beverage!





● TOUCHDOWN TWINS

— for picnic, tea or party! This Tupper Creamer and Sugar Set delights the eye and gives years of practical service! Snug, non-spill covers have hammered-aluminum handles — Creamer has special non-drip spout. In all Poly-T soft pastel colors.

● OUT OF THE HUDDLE

and popular with the "home" stands! Tupper's new vacuum-type Party Bowl. Bowl-within-bowl vacuum assembly is designed for use as ice bucket —but gives many other uses as well. Separated, 3-quart outer bowl and 2½-quart inner bowl, each with air-and liquid-tight cover, do for storage and serving. Grand for retaining the fresh crispness of salads, biscuits, buns, etc.

● CALL YOUR SIGNALS—AND MIX 'EM UP!

Newest thing in shakers, this. Tupper 2-cup Vacu-Mixer with air-and liquid-tight top that vacuum-seals itself. Can't shake off. High scorer in bar and kitchen — ideal for cocktails, milk drinks, sauces, gravies . . . any dry or liquid mix. Bends, too, to pour like a pitcher.

TUPPER GIVES YOUR PRODUCT THE PACKAGE THAT IS THE PREMIUM!

Tupper Products are designed for re-use—attractively styled in exclusive Tupper Poly-T, Material of the Future. Can't break, chip, crack or peel — Featherweight and Flexible — Tasteless, Odorless, Non-toxic — Sanitary and Easily Cleaned.

Tupper creates all kinds of containers, with or without the famous self-fastening, air-and liquid-tight Tupper Seal — custom-manufactured to your individual order! Write today for complete details.

TUPPER

© 1947 Tupper Corporation

TUPPER CORPORATION, FARNUMSVILLE, MASSACHUSETTS — New York Showroom, 225 Fifth Ave.

BLUE...

stops the eye... starts the sale

PACK TO ATTRACT IN

Maryland Blue

"That's it"... see other side

NATURALLY your product will sto more shoppers . . . and build more business . . . when it's packaged in rich, royal, "eye-stopping" Maryland Blue Glass. Here's why:

that's it

IN THE BLUE BOTTLE

BLUE makes your product easier to see.

BLUE makes your product easier to remember.

BLUE makes your product smartly modern.

BLUE insures rich, distinctive appearance.

BLUE stands out, assures better display.

BLUE advertises your product in the home.

BLUE builds profits, steps up repeat sales.

Write today . . . tell us the nature of your product and the sizes in which it is packed . . . and let us send you samples of appropriate stock designs. Or, if you use bottles or jars in large quantities, we'll be glad to create a special design for your exclusive use.

MARYLAND GLASS CORP.
BALTIMORE 30, MD.

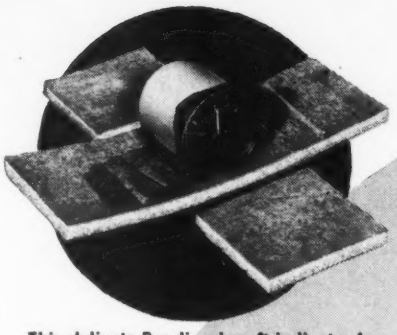
PICTURED ON THE PRECEDING PAGE

are just a few of the handsome stock designs. This diagram makes them easy to identify.

1. French Square - - - in ¼ oz. to 16 oz.
2. Maryland Oval - in 1⅞ dram to 32 oz.
3. Cabinet Square - - - in ½ oz. to 32 oz.
4. Chesapeake Oval - - in 4 oz. to 32 oz.
5. Squat Jar - - in 2 5/16 dram to 18 oz.

ALSO AVAILABLE IN CLEAR GLASS

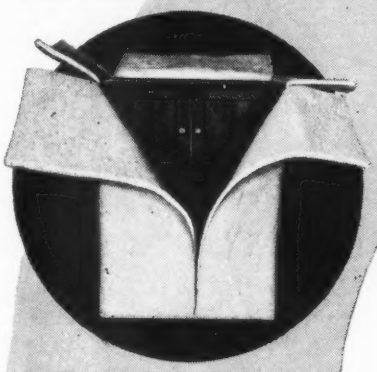
pack to attract in *Maryland Blue*



Versatility

This delicate Bendix aircraft indicator is protected from jars and jolts by Tufflex. That's because Tufflex stays resilient.

...Another name for TUFFLEX!

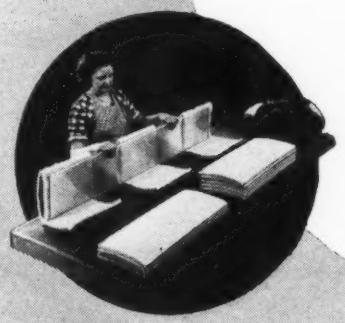


The fine finish on this portable bar is protected by fleecy, soft Tufflex. Furniture packaged in Tufflex arrives without a scratch or mar.

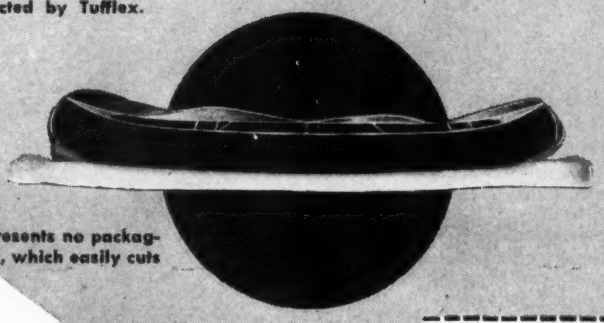
• What do you want in a protective padding material? Softness . . . flexibility . . . toughness . . . light weight? These qualities—and many more besides—make Tufflex one of the most versatile materials known today.

Tufflex cushions and protects every type of merchandise—from furniture to fragile fluorescent tubes. This fleecy-soft felted wood fiber blanket won't tear, shred, or pull apart, even when cut into narrow strips. Yet Tufflex is easily trimmed to any size or shape. Its "spring back" resilience resists heavy impact blows.

Tufflex, available in rolls and sheets of various thicknesses and widths, is the *safer* interior packing material. Let us show you why it offers a better solution for your packaging problems. Mail the coupon!



Glass panels for fluorescent lighting fixtures travel safely when protected by Tufflex.



This all-metal canoe presents no packaging problem for Tufflex, which easily cuts to any size or shape.

This radio will arrive at its destination without a scratch and with no damage to its working parts—thanks to Tufflex.

TUFFLEX* PROTECTIVE & CUSHION PADDING • THERMAL • SOUND

*REG U S. PAT. OFF.

MADE BY THE MAKERS OF *Balsam-Wool*

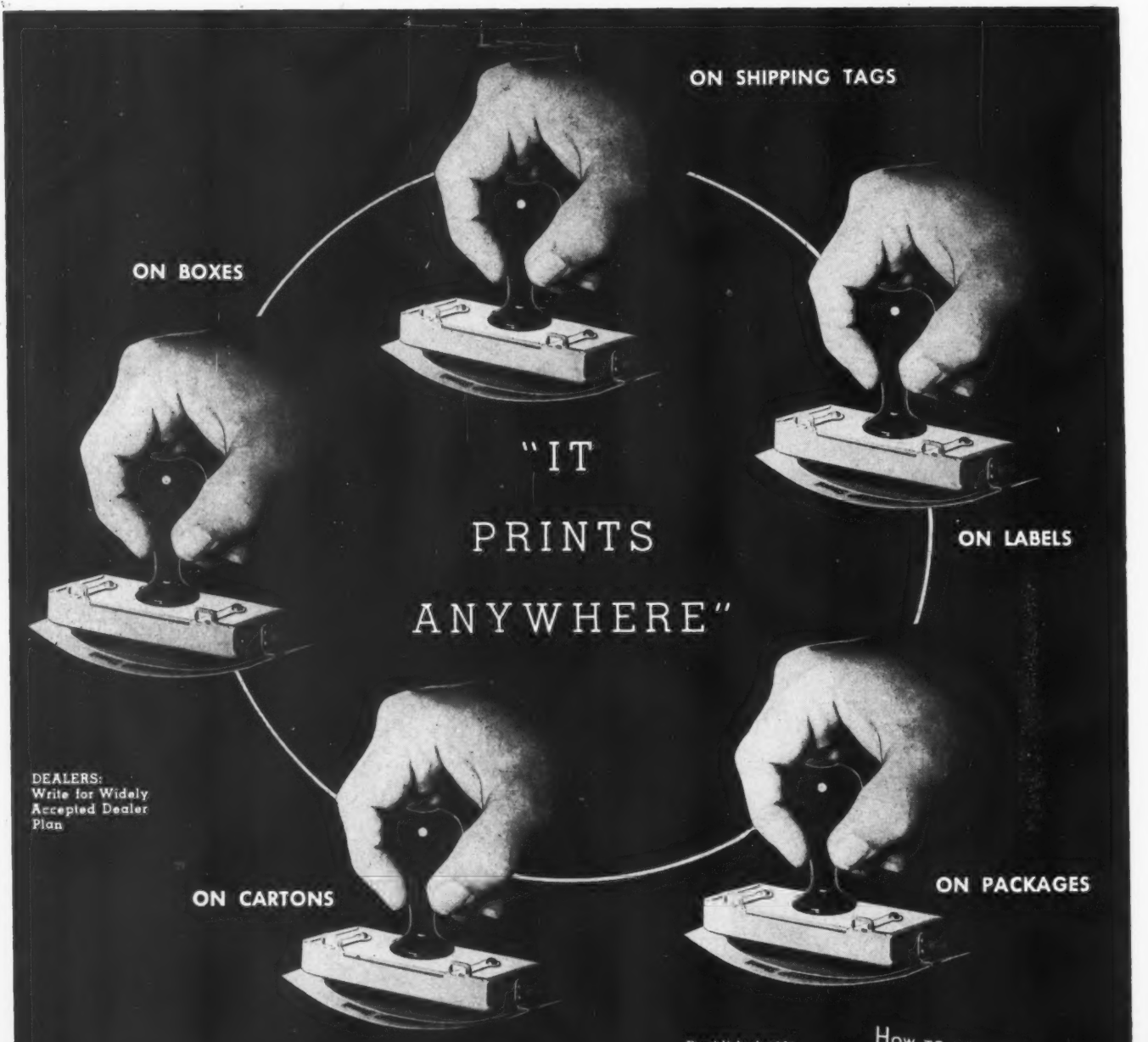
Wood Conversion Company,
Dept. 208-107, First National Bank Bldg.,
St. Paul 1, Minnesota.

Gentlemen: I want to know more about Tufflex. Please send me complete information.

Name.....

Address.....

City.....State.....



Established 1921
Reg. U. S. Pat. Off.

FAST, ECONOMICAL—IDEAL FOR MARKING, ADDRESSING, DUPLICATING, SMALL PRINTING JOBS

Guarantees you accuracy in those duplicate addresses, code markings, signatures.

The No. 1 MULTISTAMP stencil duplicator permits quick changes in wording . . . gives you "a rubberless stamp in one minute for two cents." Prints in places no other duplicator can reach . . . takes up to 5 lines of type 3 inches long. Makes 1000 or more clear copies from one stencil, one inking. Just type or write the stencil, snap it on, and print.

Complete with supplies in compact, durable case. Weight: 2 pounds

MULTISTAMP
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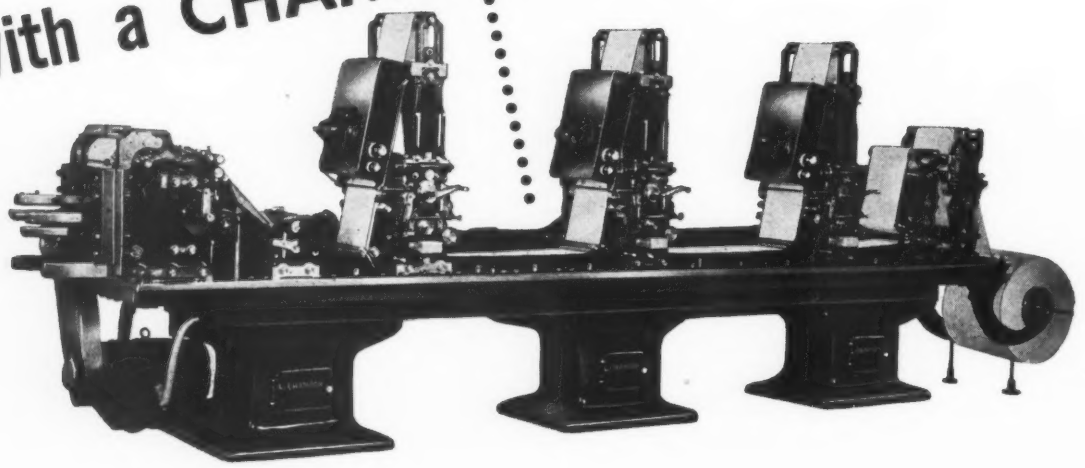
Advance your production techniques 25 years with a CHAMBON gravure press



If you are using old-style gravure presses and other obsolete production equipment, you can modernize your production line and advance your production techniques 25 years by installing the Chambon press.

This press will make it possible for you to compete successfully with today's high speed and high volume runs. And yet, you can get from it the highest quality in printing not only gravure, but letterpress and offset as well.

Furthermore, the Chambon will do more than just print. The bed of the press is built to allow the addition of extra units to do special jobs. It can be fitted, for example, to perform such functions as numbering, creasing, embossing, perforating, scoring, rotary or flat die-cutting, rotary or guillotine or sheet-cutting and rewinding. And, depending upon the run of packages, wraps, labels, tags, etc., you can add or subtract any single unit from the complete press base.

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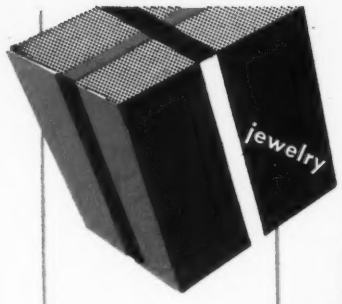

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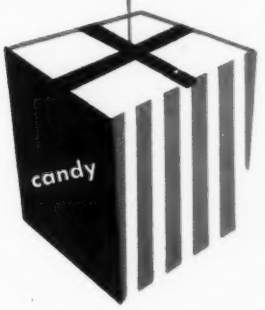

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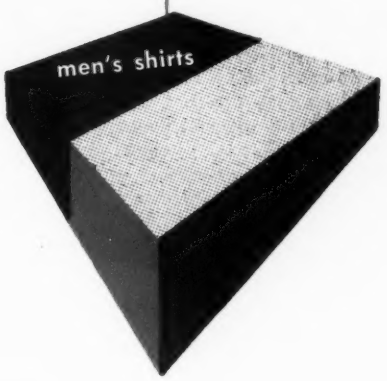

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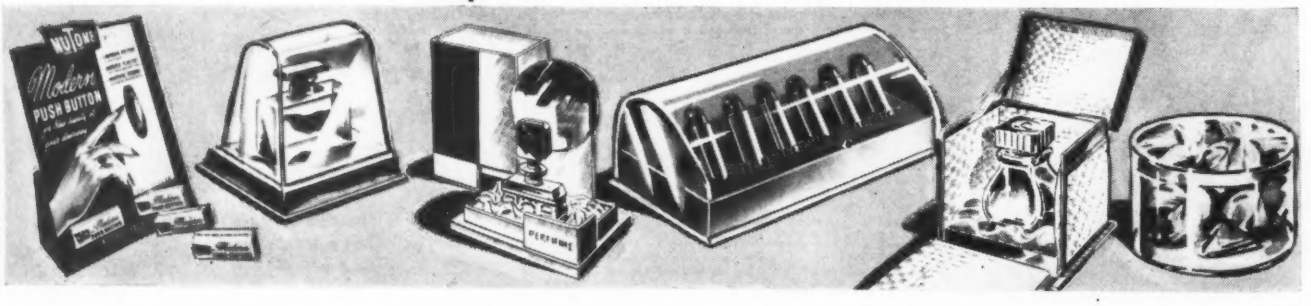

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PACKAGE *Marking*

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ONE PACKAGE — BUT 154 DIFFERENT MARKINGS

Van Raalte's problem: How to mark its beautiful new stocking box to indicate size and color in 154 different combinations without maintaining vast inventories of pre-printed boxes or labels — and without detracting from the beauty of the box?

MARKEM machines and methods supplied the perfect answer: Now Van Raalte Stocking Boxes are marked quickly *right after packages are filled* — all designations perfectly printed in special instant-drying blue-gray ink exactly matching the effective color-scheme of the box. Changes made in minutes or seconds. No wonder Van Raalte is pleased — as *you* will be!

LET MARKEM solve your problem. MARKEM service includes method, machine and inks to meet your individual requirements of speed, material and purpose, whether in marking boxes, bottles, labels, or the product itself. Tell us your needs; we'll do the rest.

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Introducing
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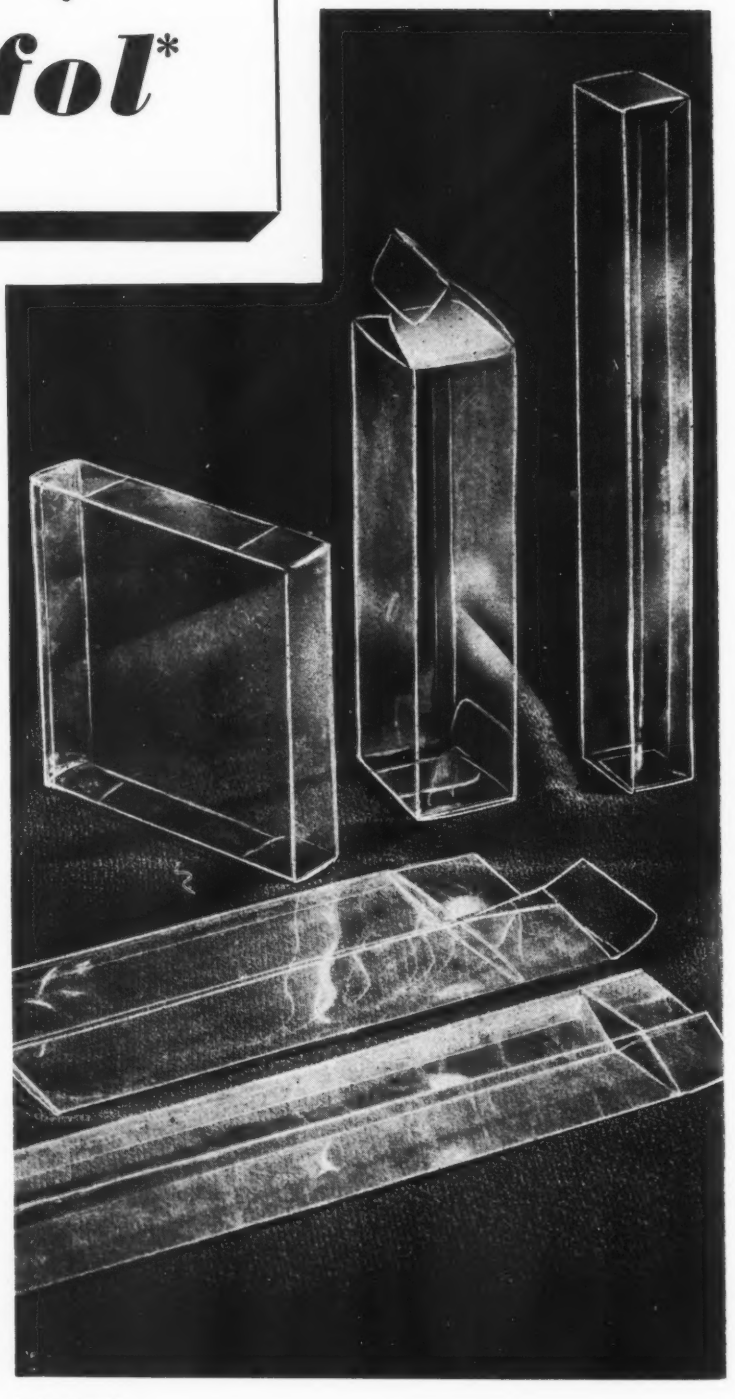
The New *ALL-TRANSPARENT* FOLDING CARTON

A window-clear plastic box at a new low cost.

Ships flat . . . folds into shape in fractions of a second.

Available in large runs . . . tuck-end or glue-end.

Your message printed in permanent, scratch-proof color.



Now you can give your product all the extra sales appeal of individual packaging in transparent plastic cartons—at new low cost.

The new 100% transparent PLASTAFOL, carton, costs less per unit because it's mass produced by a patented process.

Folded flat for shipment, the PLASTAFOL carton saves freight—can be set up fast, by machine or by hand, with big savings in labor charges.

For very slight additional cost, we print your message on PLASTAFOL cartons in colors guaranteed not to scratch, rub or wash off.

Don't miss this new merchandising opportunity. Write today for information. We welcome comparison.

* *Trademark*

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Paoli, Pennsylvania

Sales Office:
Land Title Building, Philadelphia

The PLASTAFOL carton is protected by present and pending patents.

Everybody Wins With Color Control

Color Control doesn't walk a picket line, but if it did, signs would read, "Color Control Is Fair to Everybody." Color Control simply sets up color standards that can be measured accurately. Printers tell us they like it because they know exactly what standards they have to meet. Their customers in the packaging business are happier, too, because packages seem to be more uniform in color, even when one job is done by different printers.

How To Make a Hangover Stay 'Way From Your Door

There is an ounce of prevention that will stop a package ink problem from reaching the point where you can't tell it from a hangover. It is to give your ink maker the answer to these questions: Will the package be exposed to sunlight, heat, or moisture? Will it be handled much? Must it be proof to perspiration, soaps, acids, alcohols, oils, adhesives, and other deteriorants? What is the printing surface? What printing process will be used?

INTERNATIONAL PRINTING INK • EMPIRE STATE BUILDING, NEW YORK 1, N. Y. • VOL. I, NO. 2

IS OUR FACE RED?

Maybe we shouldn't stay up so late at night that we do our dreaming the next day—like reporting in the last Package Post page that one of our customers printed (in two colors), taped, bundled, and packed 45,000 corrugated containers in 16 hours.

Fact is . . . the job was done in 4 hours!

It seems that the time reported for the job—8 o'clock to 12 o'clock—meant 8 A.M. to Noon, not 8 A.M. to Midnight . . . and is our face red.

The reason Vaposet inks did the job so quickly is that they set instantly on contact with moisture, hence were printed while the board was still wet. Would you like to speed up your production and printing of corrugated containers?

"CAN'T WEAR IT OUT", SAY LITHOGRAPHERS OF THE NEW IPI TRI-METAL OFFSET PLATE

Half-million-impression runs . . . with offset plates that show no signs of wear . . . and lithograph the last impression as clean and sharp as the first . . . have offset lithographers exclaiming, "You just can't wear out the image on one of these plates!"

The plates are the new IPI Tri-Metal plates . . . ideal for long-run lithographing of labels and packages.

For some production records in package lithographing, see the blue panel illustrating this story.

These runs were made with plates having a zinc base. Steel, when it is available for this purpose, will replace zinc for the base plate, permitting the lithographer to put the plate back on the press many more times on intermittent production jobs. One steel plate was put on and taken off the press 36 times . . . and experimental runs of 1,750,000 impressions, 2,293,859 impressions, and 3,103,101 impressions have been made.

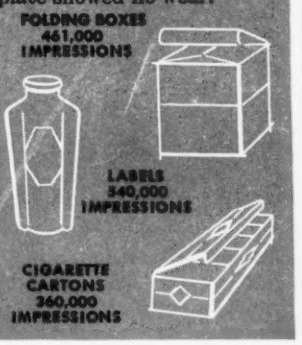
The IPI Tri-Metal plate is composed of three layers of metal—chromium, copper (the printing surface), and the base metal. The plate is processed, in essentially the same manner as a deep-etch plate. It is unnecessary for the lithographer to install metal-plating equipment for the preparation of his plates.

Although the initial cost of IPI Tri-Metal plates is higher than the cost of conventional deep-etch plates, overall costs are lower. On a 500,000 run in three colors on boxboard, one customer estimates he saved $1,450 in plate costs alone, not to mention savings in make-ready and lost press time.

Interested? Hundreds of lithographers have swamped us with inquiries, but we will try to take care of you, too, if you write.

IPI Tri-Metal Plate Production Records

The impressions reported below were made on commercial runs with IPI Tri-Metal plates. At the end of each of these runs, the image on the plate showed no wear.



THIS ENCYCLOPEDIA FITS A VEST POCKET

The little book you see illustrated measures only 2¼ inches by 4½ inches, yet contains

1,437 words on every phase of the selection of printing inks for packaging. You'll call it your "vest pocket encyclopedia."

Some of the topics it covers are: Those new hard-to-print surfaces; Which printing process?; Selecting colors to meet specifications. Copies are free.

NOT ALL WET WHEN WE BET ON VAPOSET

We learn the best items for the Package Post by chance. The other day during a discussion about equipment for our new factory in Elizabeth, New Jersey, we learned that recently, *for two days the entire facilities of our eastern branch were devoted to supplying the demand for Vaposet inks!* These are the inks which set in the presence of moisture. They can even be printed on wet corrugated board, greatly speeding up overall production of corrugated containers. They are odor-free and have wonderful sealing qualities; are ideal for food-wrapper printing.

Judging from the demand for these inks, which are winning more and more friends every day, we weren't all wet when we bet on Vaposet!

"CAN'T GET A SMELL...?"

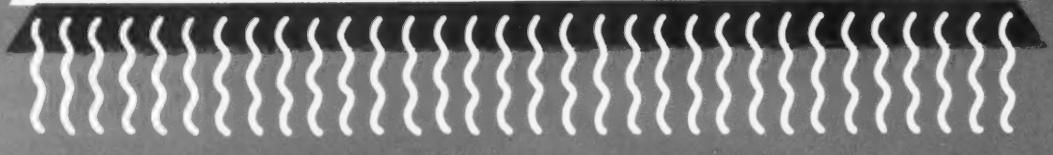
"Are IPI Vaposet inks odor-free? Why man, even with this snout I can't get a smell of that ink!"

Original, signed copy of the above testimonial will *not* be forwarded upon request, but for the food package printer and the food packager we do have a number of interesting, bona fide testimonials on the successful application of our almost odorless, instant-setting Vaposet inks on food wrappers and packages. Ask to see them.

FRUSTRATED SNOUT

ANNOUNCING...

Thermo-Kote*



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NOW, for the first time, Industry can obtain a *delayed action* thermoplastic adhesive paper. New and revolutionary, Thermo-Kote* provides many advantages long desired but never before available.

It is activated at relatively low temperatures and *remains tacky for several minutes,* — even after the removal of heat and after cooling to room temperature. It can be applied to a surface with light pressure and with the assurance of a firm set and bond, therefore in machine applications it permits the separation of the heat and pressure units. Because Thermo-Kote* remains tacky after the removal of heat, it can be used where the application of heat would affect the product or the package adversely.

It can be applied to materials or surfaces where water cannot be used.

It is clean and fast to use and adheres without wrinkles or welts.

Thermo-Kote* can be printed on either side by any process, where heat is not necessary.

If you package in glass, metal, wood, rigid plastic or similar materials, complete information about Nashua's Thermo-Kote* adhesive paper will be of considerable interest to you. Our Sales Research Department will welcome the opportunity to work with you in the adaption of Thermo-Kote* to your problems. Samples available upon request. Write today!

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MAKES PAPER MAKE MONEY FOR YOU

*Patent and Trade Mark Application Pending.

NASHUA GUMMED AND COATED PAPER COMPANY
NASHUA, NEW HAMPSHIRE

Modern PACKAGING
VOLUME 21
NUMBER 2
OCTOBER 1947

MORE GIFT IDEAS

With designers' resources once more unlimited, noteworthy special-occasion packs are appearing in many product lines

Gift packaging is a high point of interest this fall in many varied product lines. Within a few weeks holiday counters will gleam and sparkle with all the packaging frills and elegance of prewar years. Shoppers will see hundreds of staple lines specially dressed for the Christmas season.

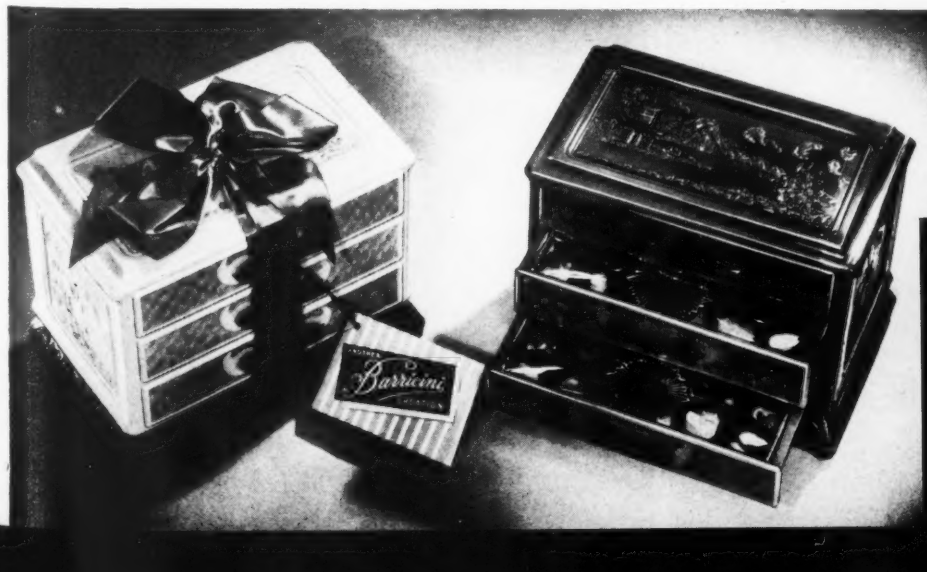
Package planners and designers, meanwhile, are busy with ideas for Valentine's Day, Easter, Mother's Day and all the other gift occasions that will follow through the coming year. Many of the packs now being brought forth in time for Christmas are suitable for gift giving at any time and in any case they present a wealth of ideas, in new forms and materials, for those who are still in the planning stage.

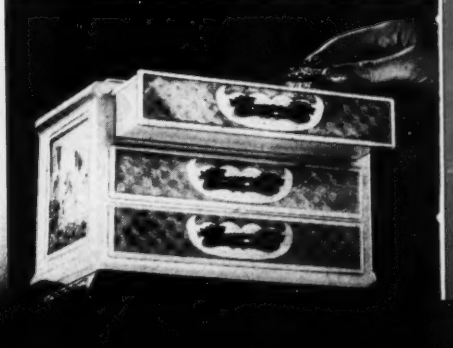
Any further speculation as to whether such glamour packaging would be resumed is needless. Back on the market this year will be most of the leading gift lines of former years, newly conceived and more resplendent than ever, with wide use of foils, decorative papers, plastics and other decorative materials denied for so long.

Wines and liquors

Of particular interest will be the special packages for wines and liquors, which disappeared entirely during the war when decorative packaging was forbidden for such merchandise. A long time leader in this category is Glenmore Distilleries Co., Louisville, Ky. Glenmore is introducing four gift packages this month.

One that literally "glows" with good cheer is an old-fashioned lantern for Kentucky Tavern (Fig. 5). The lantern is made entirely of paper and paperboard except for a wire handle which fits into eyelets in the top. The package is lithographed in six colors, spirit





1 & 2. The effect of oriental handicraft, unusual in molded plastic articles, is achieved for Chinese chest of polystyrene with three sliding drawers for Barricini chocolates. It has re-use value as a jewelry box.

3. Glenmore's glass decanter is back again. The hollow stopper is a jigger.

4. Sleeve over Old Thompson bottle looks like Christmas candle.

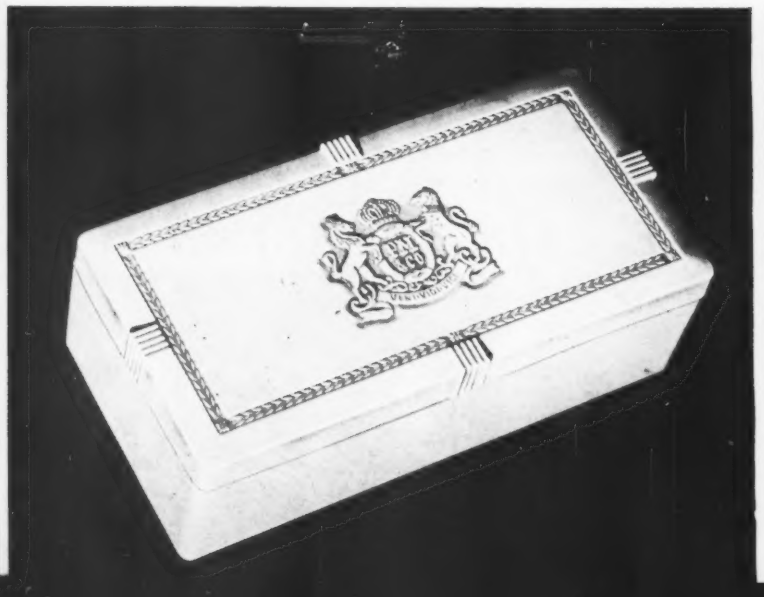
5. Lantern above is made of paperboard, die cut and scored. It holds a bottle of Kentucky Tavern. May be re-used as table decoration or hung on door knocker.

6. First re-appearance of Glenmore's stoneware jug—a popular favorite with many decorative uses after liquor is consumed.

varnished and mounted to 30 pt. board, then die cut, scored and assembled. It is formed in two pieces. The base, which is $14^1/_4$ by $16^1/_4$ in. over-all and is equipped with the two eyelets at the top, holds the bottle of bourbon. The other piece, which forms the top of the squared lantern, fits over the base as a cover, but has an opening through which the gold foil seal of the bottle is visible and appears as though it is a metal knob on the top of the lantern. One of the interesting features of the package is its novel re-use. When the fifth of bourbon is removed, the lantern may become a table decoration, be hung on a door knocker or on a Christmas tree. Christmas colors of red and green predominate.

Slipping over a fifth of Glenmore's Old Thompson blended whisky is a sleeve type of package that looks

7 & 8. This ivory polystyrene gift box for Philip Morris cigarettes has crest molded in lid. Box is hinged and has many permanent re-use values. With holly removed, it would be suitable for year-around sale.



like a Christmas candle (Fig. 4). The package is made of 140-lb. Index Bristol stock to which paper is mounted. Printing is in five colors and the unit is die cut and glued.

Two repeat items in the Glenmore gift line make their triumphal return for the first time since 1941. One is a decanter for Kentucky Tavern that simulates cut glass and can be used the year around on the home bar (Fig. 3). It is corked at the distillery and the strip revenue stamp is placed across the cork. The hollow-glass stopper, tied on with a ribbon, doubles as a jigger. The other package is the Glenmore stoneware jug for seven-year-old straight bourbon (Fig. 6). The container is glazed with brand name, distiller's address and mandatory information stamped on the stoneware before glazing to make the label a permanent affair.

Cigarettes and tobacco

There is renewed activity, too, in the gift packaging of tobacco and cigarettes. First of these to appear is an ivory polystyrene box (Figs. 7 and 8), designed for Philip Morris and Marlboro cigarettes. The box has a hinged lid to make it suitable as a permanent cigarette box and is tied with satin ribbon and sprigs of holly. This is the first Philip Morris re-use gift package since the war and one of the company's first uses of molded plastics. Previous boxes were of the simulated leather.

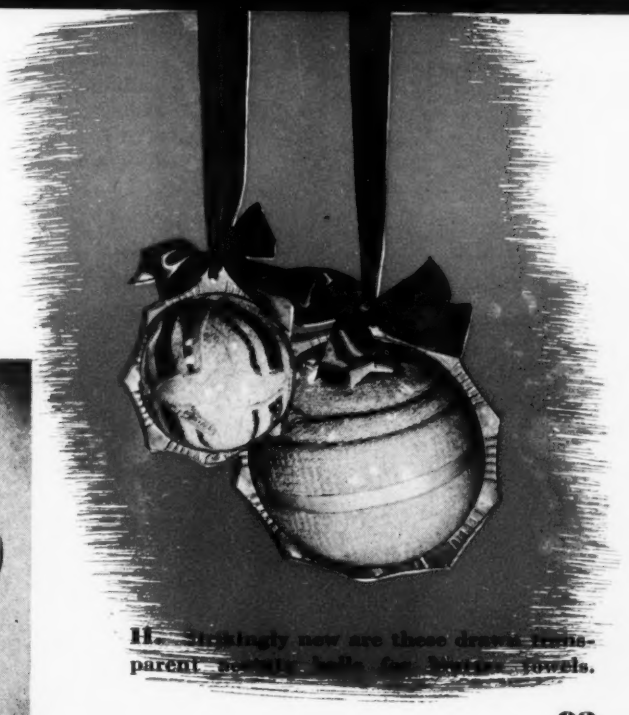
Towels

Cannon Mills has eight new packages in its ever-popular line of gift packaged towels this year, all of which were sold out to stores before the end of August.

Because of their leadership, Cannon packages are always watched by all gift packagers (Figs. 13, 14, 15, 16). Prices of the Cannon sets this year range from $1.95 for a bath towel, face towel and two wash cloths in a brilliant diagonal-striped box of green and pink with delicate scroll design to a six-piece chest of pastel water-color floral design at $7.95 containing two bath towels, two face towels, two wash cloths. The Cannon sets are always outstanding for their effective

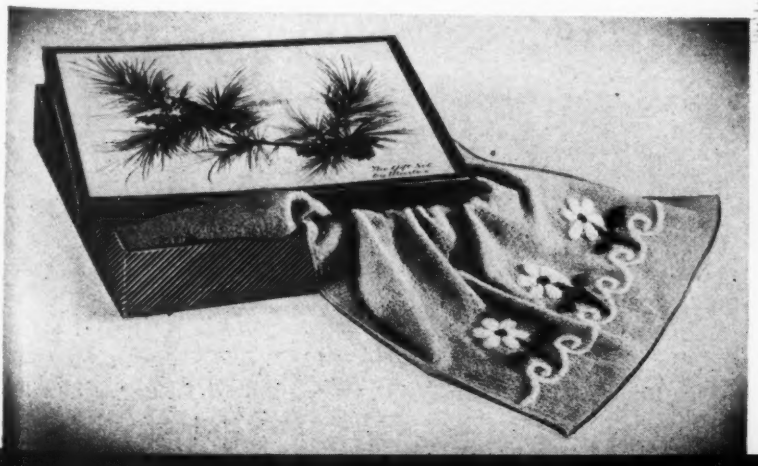
9. Two dolls made of Martex towels and wash cloths suggest an amusing gift package idea.

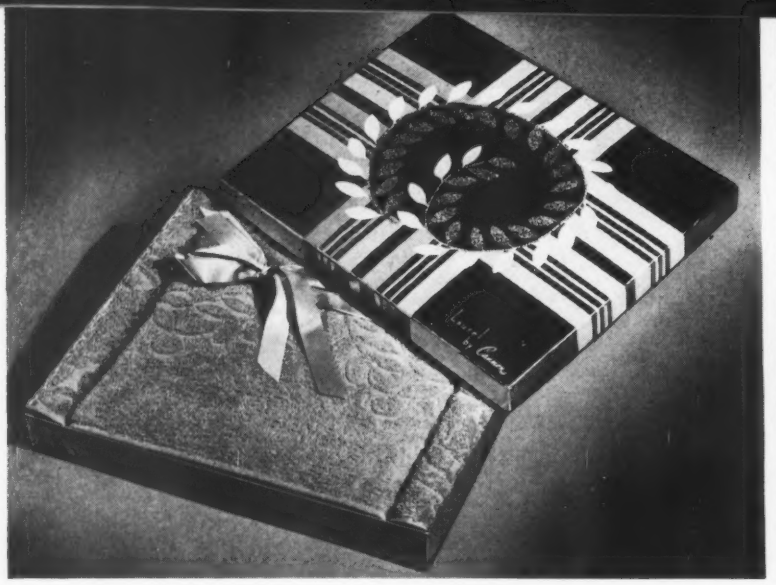
10. A Martex set for year-around sale in gray box with single rose as the only decoration.



11. Strikingly new are these deep-transparent bowls, balls for Martex towels.

12. Graceful pine-bough label is glued to pink box top with green striped base. Also Martex.



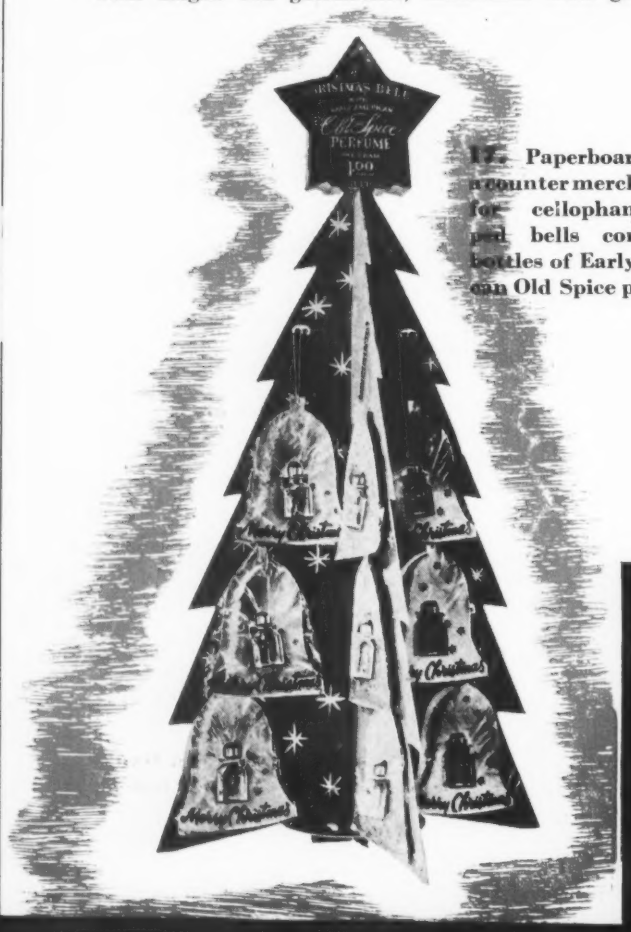


13. Cannon's Laurel set features a design relationship between the towel pattern and its gift box. The box cover is foil.

14. Cannon's Pink Lady set is in a chest-type box with water-color floral design.

15. This package for kitchen towels is appropriately decorated with bright red geraniums, combined with green and white.

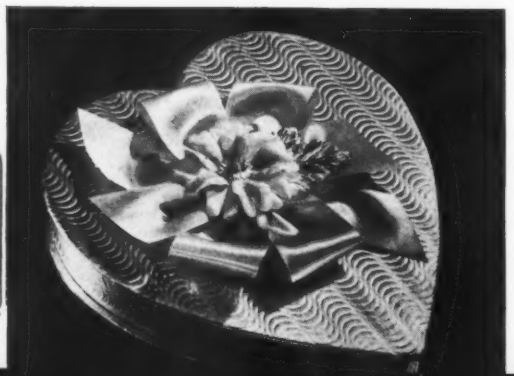
16. Gay blue "hat box" with shocking pink and green leaves for six-piece Cannon set.



17. Paperboard tree is a counter merchandiser for cellophane-wrapped bells containing bottles of Early American Old Spice perfume.

conception of pastels and design motifs that women like. New this year in the Cannon line is the use of brilliant laminated foil box covering with silk-screened motifs to match the designs of the company's Laurel and Carnation towels. These boxes will be carried for year-around gift sale to identify these two towel patterns more effectively with the Cannon name.

Martex makes its first bid for gift business since the war with a collection of four gift packages. Most unusual are what Martex calls "the biggest Christmas tree balls ever." These come in two sizes and are drawn from rigid transparent-acetate sheeting so that two half sections fit together to form complete spheres with a place to attach a ribbon at the top (Fig. 11).



18. Schrafft's heart-shaped box is covered with cellulose acetate filament yarn laminated to paper; looks like a rich brocade.

One is 8½ in. in diameter and contains a six-piece ensemble (two bath towels, two guest towels, two wash cloths). The smaller ball (5½ in. diameter) is packaged with six wash cloths. They sell for $3 and $7.50.

Other amusing packaging ideas in the Martex line are two towel dolls: "Suzy Mop," fashioned out of a kitchen dish towel, pot holder, a dish mop and two dish cloths, and "Bozo, the Clown," made of a dish towel, pot holder, dish mop, two dish cloths and a kitchen hand towel. Both of the dolls are labeled and are packaged in an accompanying box (Fig. 9).

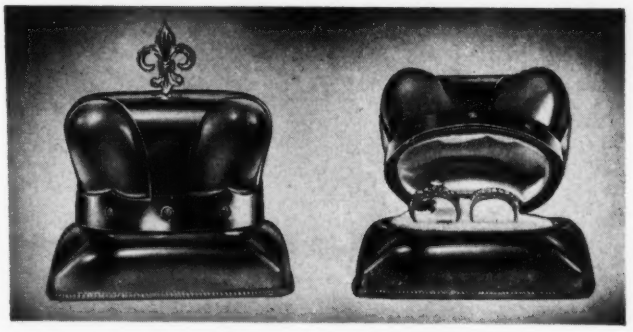
Two Martex gift boxes have been designed with year-around gift selling in mind, so that designs are not too seasonal. One of these boxes (Fig. 12)—a $20 set containing eight pieces including, in addition to towels and wash cloths, a tufted lid cover and bath mat—has a graceful pine-bough design in full color for cover label glued to a shocking pink box lid which fits over a green-and-white striped base. The other package is a two-piece folding box holding a five-piece set for $5, done in gray with a single rose in full color as the only decoration with the Martex lettering (Fig. 10).

Confections

Boxed candy may be classed as year-around gift merchandise and many candy companies have adopted for gift suggestions special containers which are in themselves decorative pieces of merchandise—sometimes more costly than the candy they contain, but which intrigue shoppers because of utility or beauty.

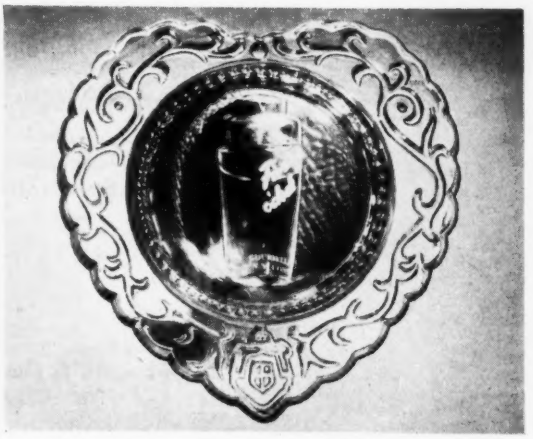
In this class is the new molded polystyrene Chinese

19. Ready-to-use Dutch crock of plum pudding.



20. Injection molded ring box of polystyrene that has metal trim to enhance crown effect. Box has hinged lid.

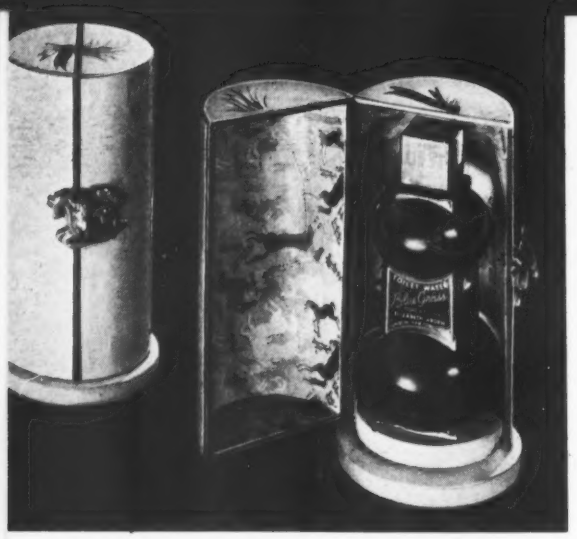
21. Gourielli "Five O'Clock" containers look like cocktail shakers.



22. Gourielli Victorian glass paper weight.

23. Two of the popular-priced Fitch gift sets for men's toiletries.

24. Folding gift box opens for display.



25. Blue Grass toilet water in private mold bottle; cylinder fastened with plastic horse.

26. Gold paper lace on acetate box topped with tree ornaments for Blue Grass set.

27. Sparkling snow man with pearl-bead eyes conceals a miniature bottle of Elizabeth Arden perfume.

28. Blue Grass powder wrapped in pink satin is placed in acrylic case with make-up items.

chest with three sliding drawers adopted by Barricini, New York, and filled with chocolates (Figs. 1 and 2).

The over-all effect is that of oriental handicraft not usually associated with molded plastic articles. It is a highly decorative chest that will be cherished long after the candy is eaten as a receptacle for cigarettes, playing cards, handkerchiefs or jewelry. Special packages of this type involve too great an investment in mold equipment unless comparatively large quantities reduce mold amortization to a reasonable figure, yet consumer desire for the package itself is a great factor in justifying this heavy investment.

The chest has been developed in three colors to match any decorative scheme in the home, combining antique ivory, Chinese red or jade green with simulated teakwood for the base and dragon-head drawer handles. Execution of the Chinese motif demanded engraved landscape panels on the top and sides of the chest with further engraving on the drawer fronts. To emphasize engraving details, all engraved surfaces are antiqued by spraying on a slow-drying paint and hand wiping.

The chests are beautifully engineered from the standpoint of plastic molding and assembly. Stops are molded to the back edge of drawers to prevent them from coming entirely out when the chest is opened, but permitting entire removal of drawer by moving them to one side. Stops are also provided to prevent the drawers from sliding open when the chest is tilted, but permitting them to open freely by a slight upward pressure on handles. Fibreboard inserts between the drawers hold contents in place for shipment.

Something else new in candy packaging is the covering for a heart-shaped box in pastel colors, ribbon and flower decorated, that has just been adopted by Schrafft's. This covering is a laminate of cellulose-acetate filament yarn to paper; the effect is that of rich brocaded satin (Fig. 18).

Jewelry

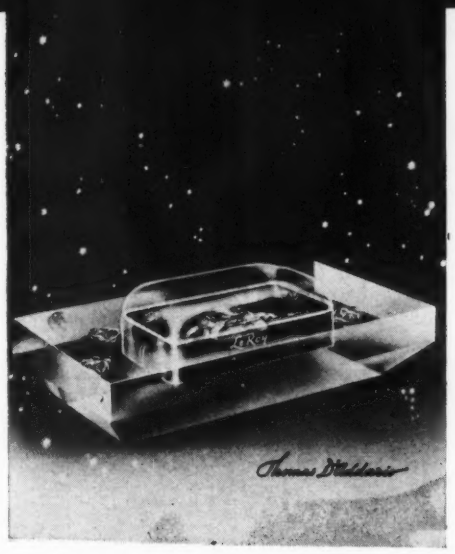
Jewelry packaging* has been given considerable attention during the past year and there is a distinct trend toward making the container an item that not only lends distinction to the product, but provides a decorative piece that the owner will be proud to keep on her dressing table.

An unusual design achieved by injection molding is the ring box made in the form of a crown for Coronation Diamonds (Fig. 20). The polystyrene base is rose magenta, with metal trim contributing to the crown effect. The box is hinged and may be opened by taking hold of the fleur-de-lis handle.

Baked goods

Baked goods—cookies, fruit cakes, plum puddings—will be packaged in many conventional-type containers of paper, metal, pottery, wood, etc. An unusual package for plum pudding is (*Continued on page 206*)

* See this month's Cover Package by Thomas D'Addario.



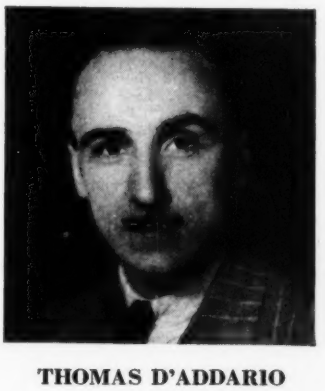
This month's COVER PACKAGE*

No. 10 of a series

THE PROBLEM: To create a distinctive and stimulating container for a wrist watch designed to sell in the upper price brackets and to be sold through quality outlets in the jewelry field. The container is to be so devised as to serve for display purposes in the jewelry-store show case or show window, as well as a take-home and re-use package for the purchaser or recipient. Although an unusual and striking design is desired, this is to be top-flight luxury packaging done in perfect good taste, with all the appeal of the product to be brought out with maximum visibility. Transparent plastic is suggested as the probable material and it is desirable that trademarking and "sell" copy be held to a minimum so as not to mar the usefulness of the container for re-use in the home.

THE SOLUTION: The designer first visited stores that were typical of outlets selling such high-price merchandise. He studied competitive brands and display possibilities and talked to dealers, clerks and consumers. He then began experiments with ideas, designs and materials. The final design structure consists of two blocks of acrylic, invisibly cemented together to form the base, and a molded dome of the same material, approximately 0.030 in. thick, which encloses the watch itself. On the bottom side of the top half of the base, prior to lamination, roses and buds have been carved and appropriately colored with brushed-in color. When the beveled bottom half of the base is joined, the realistic roses, given a third-dimensional quality by the optics of the plastic, appear to be floating in space. The top half of the base has a recessed area in the center of which rests a removable velvet pad with the watch; the elongated dome covering the watch opens on a special hinge in the back and fits tension-tight in the recessed area. The name "Le Roy" is stamped in gold. With the velvet pad removed, the package would have obvious re-use as a decorative tray for desk or dressing table. The designer suggests that the packages be made up with the appropriate flower for each of the 12 months, thus providing a personalized gift for the recipient's birth month.

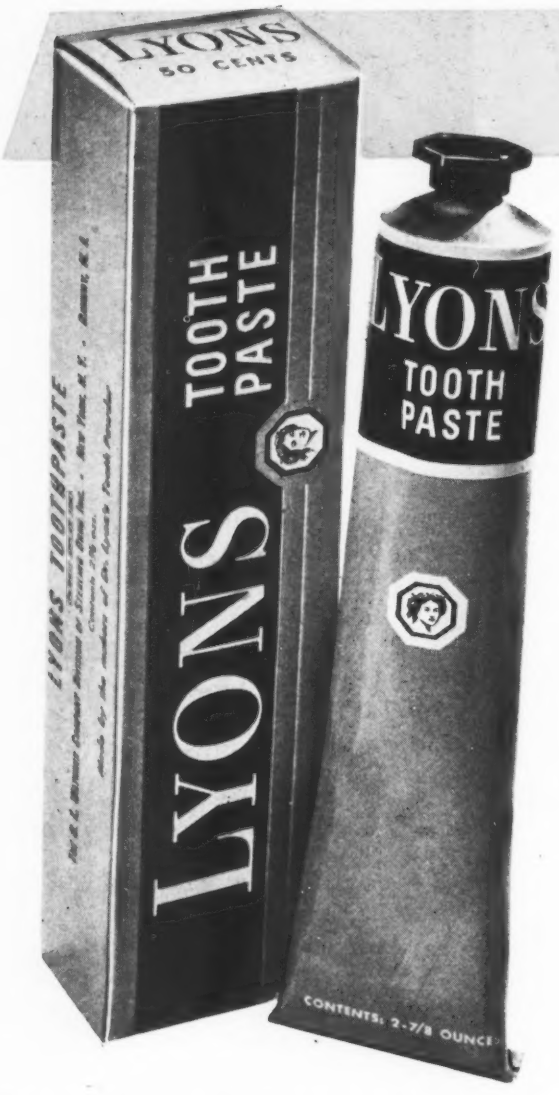
THE DESIGNER: Thomas D'Addario, operating from a studio at 55 W. 42nd St., New York, is perhaps best known for his beverage packages, but by talents and experience he is also well fitted for the flight into the ethereal represented by his hypothetical Cover Package. His unusual design ideas have won him 10 patents. He studied at Hartford Art School and Pratt Institute, taught at Pratt and has lectured at the Metropolitan Museum and the Advertising Club of New York. He has won All-America Awards, in 1934 for the Hoffman Club Soda bottle and in 1938 for his Swirl Carry-Pack, and has received two other top awards in national packaging competitions. Among his clients are Schenley, House of Rothchild, Hoffman, Feigenspan Brewing, Ju-C-Orange, Holbrooke Candies, Pedro Domecq, New Haven Clock, Myer 1890 and The R. T. French Co.



THOMAS D'ADDARIO

* Brand and company names used in this hypothetical design are purely fictitious; the design remains the property of the designer who conceived it for this cover illustration. Any resemblance to any existing package is purely coincidental.

LYONS TOOTH PASTE



Tube and carton use basic design and trademark and identical blue colors of Dr. Lyon's tooth powder, but set this apart as a new product by the omission of the word "Dr." from the name.

So you plan to launch a new packaged product? That's a major venture these days—something not to be entered into lightly, especially when you propose to crash such a keenly competitive field as the $86,000,000 annual retail tooth-paste market. It is a venture that has just been tackled, details of which may now be revealed.

The new Lyons tooth paste was publicly introduced by advertising starting September 28 and has since been on sale in some 75,000 retail outlets from coast to coast.

The story goes back more than three years ago, when The R. L. Watkins Co. Division of Sterling Drug, Inc., determined that it had achieved close to the possible peak of sales for the famous Dr. Lyon's tooth powder, based on the formula created by Dr. I. W. Lyon in 1866. This dentifrice is claimed to be America's largest selling tooth powder.

Modernized packaging had helped achieve and maintain this leadership for Dr. Lyon's tooth powder. Ever since 1870 the "Lyon's blue" had distinguished the packages of this 81-yr.-old brand. Millions of dollars had been invested in advertising of the Lyon name and package.

Why not capitalize on this priceless good will and tackle the tooth-*paste* field? This proposition took on added importance in the minds of Watkins officials in view of the realization that Dr. Lyon's tooth powder might be approaching the saturation point in its field.

Before the packaging and merchandising questions could be considered, there was a long period of product development and testing. It was necessary to develop a tooth-paste product that would be entirely new, radically different from those with which it would compete. Once developed, the product had to be tested from every angle, including consumer reaction. Finally, procedures for mass production had to be evolved and costs determined to permit profitable sales at fair-trade retail prices, preferably in about the middle between the "highs" and "lows" already established. Effective packaging, advertising and display must follow.

A team of dentists, chemists, pharmacists and other technicians at the Sterling-Winthrop Research Institute went into action. They found a compound, aluminum hydroxide, that had never before been used as a polishing agent in a dentifrice. They established, according to company claims, that with this ingredient their paste would polish teeth "$2\frac{1}{2}$ to $5\frac{1}{2}$ times brighter and four times faster" than any other known paste on the market. This provided the theme for their advertising.

Consumer tests of the product proved favorable. After a year of pilot-plant operation, production difficulties were resolved. By September 28 of this year, allocated shipments of orders for the new Lyons tooth paste had been distributed throughout the United States. Distribution to 75,000 retail outlets was preceded by an advance sample of three tubes—two 25-

Cartoning tubes, flowing on moving belt from tube fillers at rear, is a hand operation at present, but will be mechanized. On each line tubes are individually cartoned, placed in shelf containers and finally in the shipping cases.

Packaging emphasizes originality of new dentifrice, but capitalizes on prestige of Dr. Lyon's powder

cent size and one 50-cent size—mailed out to dealers in a special gift package together with a 7½-by-12-in. counter display. This introductory sampling campaign represented more than $66,000 worth of merchandise when valued at fair-trade prices. It served to introduce Lyons tooth paste to the very people who had for years been selling the Dr. Lyon's tooth powder and would naturally be concerned with promoting to their own interest this entirely new dentifrice.

Approximately October 1 the first advertising broke in the form of selling commercials on the long-established radio programs which for years had been successfully selling Dr. Lyon's tooth powder. A tremendous newspaper and radio campaign followed.

The package design

The new tooth paste is conventionally packaged in a collapsible tube and folding carton. The trick was to retain a visual identity link-up with the well-established Dr. Lyon's tooth powder in both tube and carton design and color—and yet make it perfectly clear that this was a basically new dentifrice and not just Dr. Lyon's tooth powder in paste form. A big help in establishing the latter point was the decision to drop the "Dr." and designate the new paste simply as "Lyons."

The design history really goes back to 1945. At that time The R. L. Watkins Co., still plagued by wartime restrictions on tins for Dr. Lyon's tooth powder, was making preparations to repackage the powder in modern dress as soon as materials became available.

A prominent package designer was engaged for this modernization program. The familiar Dr. Lyon's dark blue and pastel blue were retained in the new designs for the powder packages which, however, were cleaned up considerably and given greater shelf visibility than before by use of different type-face for the brand name.

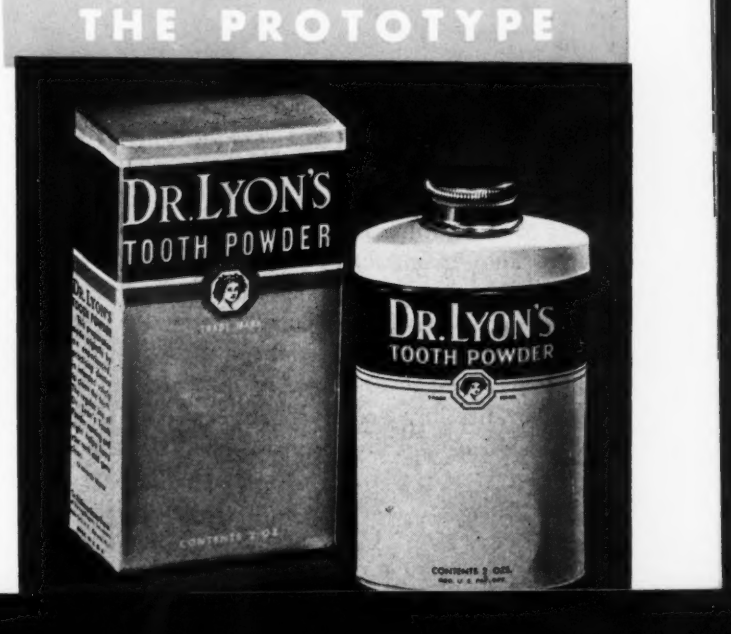
At this time the new paste was still a long-range project. Nevertheless, the designer was instructed to design a tube and package for a possible paste. He was sworn to secrecy, as were all others concerned with the advent of the new paste.

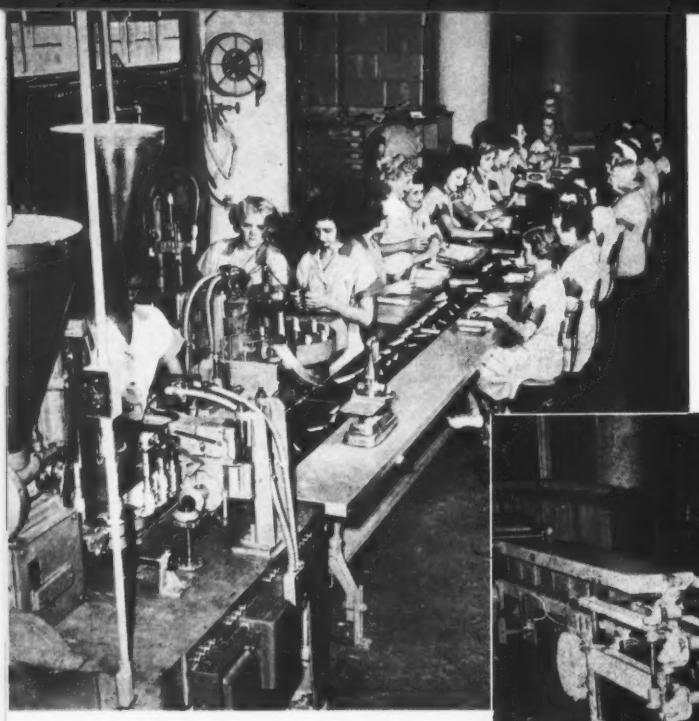
With the omission of the key word "Dr." the tooth-powder design was readily adapted to the tube and carton when the time came. A strong identity link to the established powder was achieved by careful specification of the same light and dark blue colors, similarity in lettering and design elements and reproduction of the line-drawn woman's head in an octagonal vignette, long used as a silent trademark for Dr. Lyon's.

As will be seen in the accompanying photographic close-ups, the resulting package face is strong and simple—merely "Lyons Tooth Paste" in bold lettering and the trademark emblem. Note that the apostrophe has been dropped from "Lyon's."

Color standardization

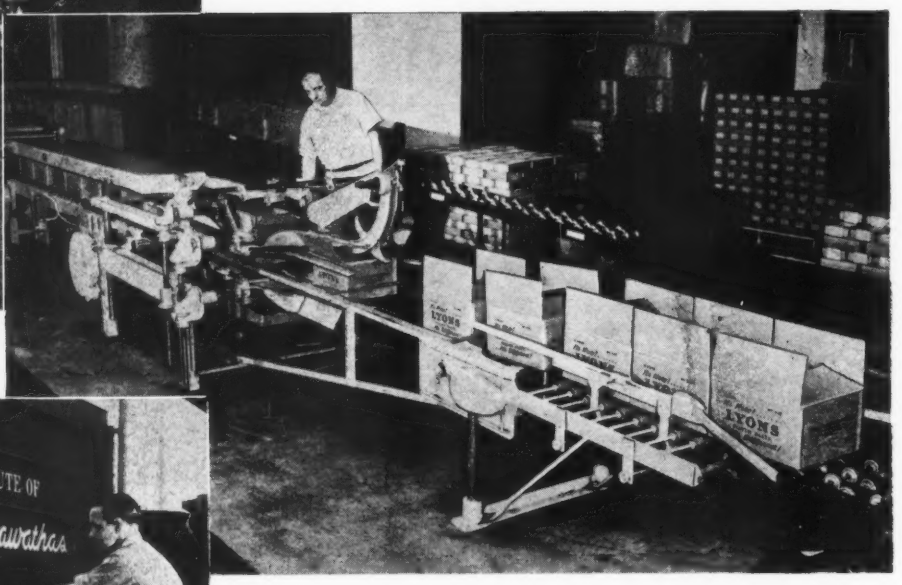
It has always been difficult in large package orders to keep colors standardized and true, particularly when trying to achieve the same colors with different types of





Normally two tube-filling machines on each line feed two different container sizes simultaneously and two crews work on opposite sides of belt.

Filled cases feed into a circular accumulator and thence into case sealer. Incoming materials and outgoing shipments are handled on pallets.



Printed shipping cartons emphasize, "It's new! . . . It's different!" Stocking 75,000 retailers before introduction of new paste was a big job.

inks and enamels applied to various surfaces such as paperboard, collapsible tubes and rigid tins. Realizing the extra importance of color standardization in this case, the company took steps to meet the problem.

The Hilton-Davis Chemical Co. Division, another member of the Sterling Drug family, was called into the picture. They manufacture the pigments used in colored printing inks. A standard for the two blues was agreed upon. Then Hilton-Davis specified the proper pigments for the inks and baked the two colors on two small enameled plaques. These plaques are distributed by the Watkins purchasing department to all suppliers of tubes, cartons and display materials. All then procure the same ink colors and check their runs constantly against the plaques to maintain the accurate colors.

Even though orders for tubes, for instance, must necessarily be placed with two widely separated concerns, Watkins is assured of absolutely standard color.

For these tubes, millions of cartons and shelf containers were required. Lyons tooth paste comes in three sizes—10-cent, 25-cent and 50-cent. The latter two sizes are fair traded at 23 and 43 cents, respectively. The 10-cent tube contains 0.55 oz. of paste and is packed in shipping packages of four dozen, six dozen and 12 dozen. The 25-cent, or $1^3/_8$-oz., size is shipped in two-dozen, four-dozen and six-dozen lots, while the 50-cent, or $2^7/_8$-oz., size goes to the trade packed in one-dozen, three-dozen and six-dozen containers.

The use of shelf containers, illustrated here, is in line with the recent drug-trade trend in which the Sterling Drug affiliates have been leaders. (See "Shelf Containers," MODERN PACKAGING, Feb., 1947, p. 94.) The Lyons tooth-paste containers are as well printed and decorated as the individual cartons. Side panels are printed to resemble a stack of individual cartons and thus may be used right on the service shelves to give a full-stock appearance.

Equipment problems

Considerable time was required to assemble the necessary packaging equipment in the Watkins plant at Rahway, N. J. It was necessary to procure tube-filling

machines. As this is written, the packaging equipment and set-up is not as completely automatic as it may eventually become.

At present, after the mixing operation is completed in colloidal mills, the paste is taken by batches in stainless steel batch-wagons and pumped into the filling machines. Each batch contains 1,000 lbs. The tube-filling machines, each with a capacity of 54 tubes a minute, discharge on moving belt lines along which 11 girls insert tubes in cartons, shelf containers and shipping cases.

The entire plant has been "palletized" and movement of the shipping cases on pallets to loading platforms is by electric truck. For the past two months the plant has been operated on a double-shift basis to meet advance demand.

Point-of-sale aids

Point-of-sale material emphasizes that an entirely new dentifrice has been created and stresses the blue colors of the package for identification. The dealer-aid program includes 25,000 window displays, 35,000 standing-girl interior store displays, 35,000 counter cards and 35,000 window display pieces—a total of 130,000 display pieces.

Watkins officials consider the dealer gift package an important factor in launching the new paste. The outside label of this package, as it is prepared for mailing, is boldly lettered with the words "a gift for you." Inside, folded over to save space, is a counter display card to which are attached the three gift packages which the retailers can sell without any cost to them.

Seldom, if ever, company officials believe, has the merchandising path been so carefully prepared for a new consumer product tied by its package to an existing product with high prestige.

CREDITS: *Basic package design, Georges Wilmet, New York. Tubes, Sun Tube Corp., Hillside, N. J., and Wheeling Stamping Co., Wheeling, W. Va. Folding cartons, General Carton Corp., Brooklyn, N. Y. Shipping cartons, The Hinde & Dauch Paper Co., Sandusky, Ohio. Case sealer, J. L. Ferguson Co., Joliet, Ill.*

Unusual introductory idea was mailing gift package containing three tubes of new paste and a counter display to each retailer. Inspecting mailing here are R. R. Ekkelman, factory manager (left), and D. H. Williams, vice president of the Watkins division of Sterling Drug, Inc.

Elaborate window display stressing paste's sales points is one of four display pieces totaling 130,000 dealer aids. Colors used in displays are carefully controlled to match package exactly.

New LYONS Toothpaste
NOT JUST ANOTHER TOOTHPASTE... BUT A RADICALLY DIFFERENT TOOTHPASTE!
Gets Teeth 2 to 5 times brighter than any other toothpaste!
Buy LYONS Toothpaste here!
LYONS TOOTH PASTE
LYONS Toothpaste Utterly New!
Polishes without
Cleans without
LYONS Toothpaste - it's radically different!

Three sizes are over-packaged in quantities of 1 to 6 doz. in shelf containers resembling a stack of unit cartons.

COLOR PLATES, COURTESY THE NEW HAVEN PULP & BOARD CO.

In today's highly competitive market, frozen food packages must have appetite appeal. This is becoming even more essential with the rapid development of new store display cabinets in which the packages are seen by the shopper. Birds Eye-Snider's frozen poultry packages are now carrying these mouth-watering, full-color illustrations of the products contained. Identity is retained by keeping the familiar Birds Eye trademark in a prominent position. The food illustrations are reproduced from color paintings.

COLORFUL BIRDS

Birds Eye's redesigned packages use 4-color reproductions to make frozen chicken look just as wonderful as it tastes

In the beginning of the frozen food industry, when there was little competition, all attention was centered on suitable protective packaging. Package appearance was scarcely given a thought.

As the market grew and newcomers entered the field, it was realized that something had to be done to create appetite appeal with the package because, like other foods in opaque packages, there was no way to create impulse selling by the appearance of the product.

In the last few years, many package design techniques have been tried by the growing number of frozen food producers to create appetite appeal with illustrative treatment on the surface of the package. This type of design is now becoming even more essential with the rapid development of new store cabinets that put the packages in full view of the shopper.

Watched with great interest for its leadership in this field is the Birds Eye-Snider Div. of General Foods Corp., which launched its first four-color packages of Birds Eye frozen fruits and vegetables two years ago. (MODERN PACKAGING, Sept., 1945, p. 98).

Latest development in this program is the redesign of the first two packages in Birds Eye's line of frozen poultry products. These two packages are for quick-frozen roasting chicken and frying chicken. To be released soon will be similar full-color packages for fricassee and broiled chicken.

The study to increase point-of-sale efficiency and effectiveness for the frozen poultry packages began about two years ago. The striking improvement can be appreciated by a comparison of the familiar old package illustrated below with the full-color packages on the opposite package.

The new poultry cartons adopt the family identification motif of the fruit and vegetable packages and even retain enough of the old package design for quick recognizability of a well-established name. The aim of the pictorial illustration is to present dramatically the appetite appeal of the finished products—a gloriously roasted chicken, a platter of golden fried chicken. The packages to come will show a steaming casserole of chicken fricassee or a tray holding a richly browned and broiled chicken.

As the poultry packages are much larger than the fruit and vegetable packages, they permit large eye-catching illustrations of the product to whet the appetite and encourage an impulse sale. The full-color illustrations are reproduced from paintings of the food.

The cartons are of two-piece construction—first printed, then wax coated. The bottom holds the product and the top telescopes over the bottom. The bottom piece is not printed since it functions merely to carry the product. Consumer information appears on the side panels and has been rearranged to give better identity and legibility. The side panel shown in the illustration contains information on contents and how to store the poultry in the home. The other side panel, not visible in the picture, covers data on how to cook and how to serve the product. End panels have been improved by carrying the product name in display type to differentiate the types of chicken at point-of-sale regardless of the manner of display or stacking. A small reproduction of the trademark on the carton ends also identifies the package as a Birds Eye product. On top are blank spaces for entering weight and price.

CREDITS: *Designer, Frank Gianninoto & Associates, New York. Cartons, The New Haven Pulp & Board Co., New Haven, Conn.*

Birds Eye's old package had strong trade identity, but there was nothing about this package to whet the shopper's appetite. New full-color packages (left) are the latest step in Birds Eye long-range redesign program.

MILGRAM'S MEATS

Pre-packaging of fresh meats in the chain of supermarkets operated by Milgram's in Kansas City, Mo., offers an interesting study of this type of packaging in a typical local organization.

Proceeding cautiously despite the highly favorable indications to date, Milgram's started out with pre-packaging of processed meats only, added a packaged fresh-meat department, but in its experimental stores still operates a service meat counter as an adjunct to self service. Now the management is ready to predict that self service will eventually replace butcher service altogether.

Like many other leading chains (Milgram's was the first supermarket operation in Kansas City to set up a store offering 10,500 items under a single roof) the company began dabbling with pre-packaging of luncheon meats and later fresh-cut meats shortly before the war and was completing plans for an all self-service meat market in one of its largest stores when the war came along. Subsequent shortages not only in packaging materials but the meat itself made it impossible to experiment further during the war.

However open-type, self-service refrigerated cases which had worked out well with the cheese pre-packaging were kept ready for a switch to fresh meat self-service operations and immediately after V-J Day Milgram's put its luncheon and prepared-meats merchandising program on a 100% pre-packaging basis. Their largest store, at 32nd and Troost Sts., typical of Kansas City midtown residential areas, was selected for the fresh-meat pre-packaging test not only because of its large volume of sales, but for the "average customer" reaction.

Processed meats

Luncheon meats—including salami, thuringer, frankfurters, liverwurst, bologna, head cheese, minced ham, sliced ham, Polish sausage, sausage, braunshweiger, veal loaf and pressed ham—have been successfully pre-packaged for more than a year, as part of the cheese-department operations. One open-front case and one completely open, non-refrigerated self-service table in the center aisle near the case are used to merchandise all luncheon and prepared meats—each packaged in cellophane, heat sealed and provided with a moistureproof waxed paper label wrapped within the package. Luncheon meats are cut into 1/4-lb., 1/2-lb., 1-lb. and 2-lb. sizes according to the "general demand" which Louis Lieberman, in charge of the department, has tabulated for each variety. Four girls, who also cut cheese, do the entire cutting and packaging job on a broad pine shelf behind the self-service cases. Restocking is a continuous operation from opening until closing time, the case being refilled an average of three to four times a day by passing the packaged meats over the back of the case to a clerk filling it in from the front. Milgram's

how a pork chop gets packaged

1 An experienced butcher uses a slicing machine to cut medium-thick pork chops from prime meat.

2 The chop is weighed and the weight and price marked in heavy crayon on a three-color waxed-paper label.

Moving cautiously, Kansas City chain graduates from processed to fresh meats, learning its lessons in packaging, and now foresees 100% pre-packaging

agrees with other experimenters, incidentally, that one piece of equipment seriously needed to speed up self-service packaged meat turnover is a refrigerated open-front case which can be stocked from the back.

During the year's time that luncheon meats have been sold in this way, the department has thoroughly surveyed operating costs, labor costs, sales results, etc., as a basis for entering the fresh-meat field in the same way. Labor cost and materials cost for packaging the average $^1/_2$-lb. to 1-lb. slice of luncheon meat has been set at from as little as $1^1/_4$ to 2 cents up to 6 cents for large whole sausages or liverwurst links. As evidence of the success of this operation, sales of luncheon meats are from 45 to 60% higher per week than during the best year previous to the operation and apparently can be increased further, according to the management, by addition of more refrigerated display space.

Fresh-cut meats

Self-service fresh meats came into the picture at the start of 1947 only as a corollary feature to personal service at the standard meat counter, on which basis Milgram's has felt it possible to work out several problems with the least confusion and with as few mistakes as possible.

The combination of service operation with self service gives the customer an opportunity to contrast for herself the differences between the two. Moreover, as an immediate advantage, it has enabled Milgram's to continue to offer fresh steaks, round steaks, roasts, pork chops, hams, bacon, sausage, hamburger, rib steaks and other popular meat items to late shoppers after 6 p.m., when union rules demand that member butchers close up shop. Actually it was this necessity which moved Milgram's to adopt fresh meat on self service at the outset, since the store's appeal to shoppers was lessened considerably after 6 p.m. when no meat could be purchased. As an example of how well this operation has worked out, the self-service case averages 100 lbs. per hr. on week days and 200 or more lbs. per hr. on Saturdays —a large percentage of which is sold to late shoppers after 6 p.m.

All varieties of fresh meats are packaged by eight butchers, on duty during the slack hours of the day, who do the cutting and one woman employe who handles most of the actual wrapping. Paul Dexter, meat manager, checks the refrigerated cases hourly and determines which meats will be packaged and placed on display next. While it might be possible to set up a schedule on which to work, Milgram's has found a flexible selection and packaging program works best from a meat-appearance standpoint. Thus almost no meats on display have been in the case for more than two hours and the packaging output behind the meat counter depends entirely on the turnover from the cases. An exception, of course, is the late afternoon

3 The chops with labels are passed down the table to wrappers. (Note appearance of the finished package.)

4 Chop with label is wrapped in cellophane and heat sealed on back over waxed-board backing.

1 An experienced butcher uses a slicing machine to cut medium-thick pork chops from prime meat.

2 The chop is weighed and the weight and price marked in heavy crayon on a three-color waxed-paper label.

Stocks in refrigerated self-service cases are replenished hourly, all items moving in 2 hrs.

hours when approximately 600 lbs. of variegated fresh meats are packaged to handle both rush evening shopping crowds and late day shoppers who arrive in the market just after 6 o'clock. On Saturdays an average of 2,000 lbs. are packaged and sold on self service. While the woman employe handles the brunt of the packaging at a small table equipped with a label rack, 18-in. cellophane rolls and a hand heat-sealer, every butcher on the counter cuts and packages several times a day, detailed to the specific job by Mr. Dexter.

From one to three refrigerated open-front cases are used for pre-packaged fresh meats, the number being dependent upon special demand such as Saturday crowds, pre-holiday shopping and the evening rush. Two are used for the most part, however, with from 200 to 250 lbs. of fresh meat displayed all the time and continuously restocked by the butchers.

Packaging problems

Several packaging problems have had to be solved and more remain to be overcome after several months of intensive selling.

First the matter of absorbing packaging cost, which after fair consideration has been passed along to the customer. Tabulation of labor cost, packaging-materials cost, space chargeable to the meat market, etc., has set a definite cost per meat item which is tacked on to the price.

A small sized steak, for example, may be packaged for 2 cents, large steak 3 cents, link sausage 2 cents, pound of hamburger 3 to 4 cents, pork chops 3 cents, frankfurters 2 cents, up to roasts, hams, picnic hams and other large pieces which are charged out at from 5 cents to 8 cents, dependent upon the size. Typical chuck roasts on self service are priced at the same per-pound rate as prevails at the service counter plus 5 cents added for packaging and labor. These are all-inclusive costs, it should be borne in mind. Only in

RECOMMENDATIONS ON CELLOPHANES FOR MEATS

Authorities say that discoloration of meat in contact with cellophane can be eliminated

cutting room for 15 to 60 min. (no longer) before packaging to bring them to normal red color.

3 The chops with labels are passed down the table to wrappers. (Note appearance of the finished package.)

4 Chop with label is wrapped in cellophane and heat sealed on back over waxed-board backing.

rare exceptions, such as round steak where prices are already a source of customer complaints, is this charge eliminated.

The significant and surprising thing is that while it is of course readily obvious to the customer that she is paying a premium for packaging simply through comparing prices detailed on signs along the service counter, there have been few objections. Milgram's feels at present that it is the convenience of the thing rather than the additional eye appeal of pre-packaged meat which seems in the mind of the consumer to justify the higher price. Convenience alone, however, is not credited entirely for the fact that pre-packaged meat sales are almost entirely "plus business"—sales at the service counter showing no drop whatsoever from volume figures established in 1946.

Among the worst of the problems has been the discoloration of fresh-cut meat. The semi-hourly preparation of the packages has done away with this to a large extent and no meats are ever put up for more than one day's requirements. Nevertheless where steak, round steak, liver and other meats come in direct contact with the type of cellophane being used (MST), a definite discoloration ensues which is likely to cause customer dissatisfaction.* Milgram's plans to begin using new specially treated MSAT cellophane, which resists discoloration, as soon as possible. However, due to the extremely rapid turnover of all meats, discoloration is a less important factor now than it would be if meats were kept on sale for more than two days. The heat of hand sealers used to close the package has also been guilty of discoloration; but this has been eliminated for the most part by the use of paperboard trays or boats under each piece of meat, providing insulation at the time the sealer is pressed on the cellophane.

Milgram's experienced some difficulty in obtaining

PACKERS FOR PACKAGING

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Pointing out that customers are being conditioned to the buying of wrapped and packaged products from open displays, Mr. Specht declared that self-service retailing of packaged meats is practical, despite certain difficulties involved and is the best answer to the customary 10- to 15-min. wait with which women are confronted at the meat counter.

Groceries are now approximately 80% self service, the Armour president stated, while the volume of meat being sold by this method is under 5% of the total and possibly as low as 1%.

Extension of packaging is also in line with the modern consumer's insistence on strict cleanliness in the food she buys, Mr. Specht indicated. He cautioned packers to pay close attention to package materials and to make certain that meats were packaged in units of convenient size. He cited the use of cooking directions and menu suggestions on the package as one of the best ways of building brand preference.

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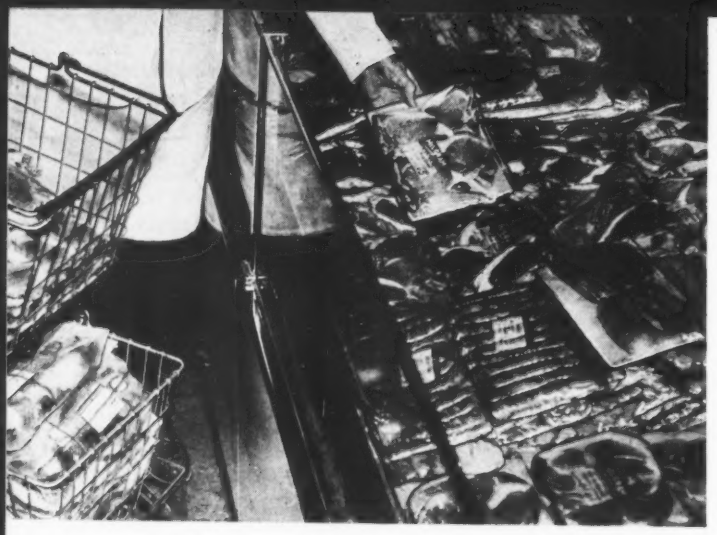

Stocks in refrigerated self-service cases are replenished hourly, all items moving in 2 hrs.

hours when approximately 600 lbs. of variegated fresh meats are packaged to handle both rush evening shopping crowds and late day shoppers who arrive in the market just after 6 o'clock. On Saturdays an average of 2,000 lbs. are packaged and sold on self service. While the woman employe handles the brunt of the packaging at a small table equipped with a label rack, 18-in. cellophane rolls and a hand heat-sealer, every butcher on the counter cuts and packages several times a day, detailed to the specific job by Mr. Dexter.

From one to three refrigerated open-front cases are used for pre-packaged fresh meats, the number being dependent upon special demand such as Saturday crowds, pre-holiday shopping and the evening rush. Two are used for the most part, however, with from 200 to 250 lbs. of fresh meat displayed all the time and continuously restocked by the butchers.

Packaging problems

Several packaging problems have had to be solved and more remain to be overcome after several months of intensive selling.

First the matter of absorbing packaging cost, which after fair consideration has been passed along to the customer. Tabulation of labor cost, packaging-materials cost, space chargeable to the meat market, etc., has set a definite cost per meat item which is tacked on to the price.

A small sized steak, for example, may be packaged for 2 cents, large steak 3 cents, link sausage 2 cents, pound of hamburger 3 to 4 cents, pork chops 3 cents, frankfurters 2 cents, up to roasts, hams, picnic hams and other large pieces which are charged out at from 5 cents to 8 cents, dependent upon the size. Typical chuck roasts on self service are priced at the same per-pound rate as prevails at the service counter plus 5 cents added for packaging and labor. These are all-inclusive costs, it should be borne in mind. Only in

RECOMMENDATIONS ON CELLOPHANES FOR MEATS

Authorities say that discoloration of meat in contact with cellophane can be eliminated and shelf life lengthened if the advice of the cellophane producers, who have spent years studying the problem, is followed. Special types of cellophane for both fresh and processed meats have recently been developed; they are becoming available in steadily increasing quantities. Here are expert recommendations:

For fresh meats, use only MSAT-80.* When this film is correctly applied and with proper refrigeration, fresh meats will retain good color as long as 72 hrs. MSAT-80 has two different surfaces: one wettable, one not. The wettable side *must* be placed in intimate contact with the meat. To reduce bleeding and drip and to maintain freshness, meats must be chilled at least 24 hrs. at 32 to 35 deg. F. Cutting should be done in a room maintained at about 40 deg. and packaging at 50 deg. or lower. Beef cuts (most susceptible to discoloration) should be exposed to the air of the cutting room for 15 to 60 min. (no longer) before packaging to bring them to normal red color. The packaged meat must be stored at a temperature not above 40 deg. and for maximum shelf life, preferably not over 36 deg. Items up to 2 lbs. may be wrapped in the 300-weight MSAT-80; for cuts over 2 lbs. use No. 450.

For processed meats either LAT (non-heat-sealing) or LSAT (heat-sealing) are specified. Their water-vapor permeability has been adjusted to permit controlled drying of the product, which tends to reduce sliming and molding; either excessive drying or excessive moisture must be avoided. The same temperatures for packaging and storage as for fresh meats should be observed. LAT and LSAT cellophanes do *not* retard the fading of color of smoked and luncheon meats; fading of these items is a function of light intensity. Soft-white fluorescent lighting of low intensity appears to be the most desirable. Research in meat-processing methods is under way.

* The designations used here are for DuPont grades; the recommendations are those of the DuPont company.

rare exceptions, such as round steak where prices are already a source of customer complaints, is this charge eliminated.

The significant and surprising thing is that while it is of course readily obvious to the customer that she is paying a premium for packaging simply through comparing prices detailed on signs along the service counter, there have been few objections. Milgram's feels at present that it is the convenience of the thing rather than the additional eye appeal of pre-packaged meat which seems in the mind of the consumer to justify the higher price. Convenience alone, however, is not credited entirely for the fact that pre-packaged meat sales are almost entirely "plus business"—sales at the service counter showing no drop whatsoever from volume figures established in 1946.

Among the worst of the problems has been the discoloration of fresh-cut meat. The semi-hourly preparation of the packages has done away with this to a large extent and no meats are ever put up for more than one day's requirements. Nevertheless where steak, round steak, liver and other meats come in direct contact with the type of cellophane being used (MST), a definite discoloration ensues which is likely to cause customer dissatisfaction.* Milgram's plans to begin using new specially treated MSAT cellophane, which resists discoloration, as soon as possible. However, due to the extremely rapid turnover of all meats, discoloration is a less important factor now than it would be if meats were kept on sale for more than two days. The heat of hand sealers used to close the package has also been guilty of discoloration; but this has been eliminated for the most part by the use of paperboard trays or boats under each piece of meat, providing insulation at the time the sealer is pressed on the cellophane.

Milgram's experienced some difficulty in obtaining bloodproof, waterproof and easily marked labels before hitting upon the present three-color waxed paper label, but has had no trouble since.

CREDITS: *Cellophane, E. I. DuPont de Nemours & Co., Inc., Wilmington, Del. Labels, The West Tape & Label Co., Omaha, Neb.*

* See the accompanying box, "Recommendations on Cellophanes for Meats," for the cellophane producer's answer to this problem.

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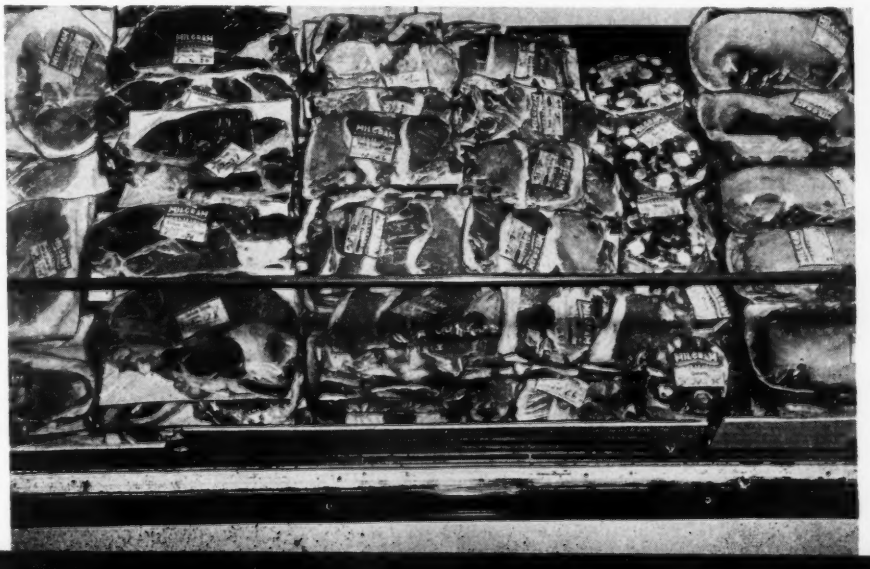
Mr. Specht declared that packaged frozen-meat cuts had failed to come up to optimistic predictions made for them several years ago largely because it costs more than it is worth to produce them in the packing plant due to refrigeration expense, inventory problems and related factors. Frozen-meat cuts, he said, do not offer any particular advantage to the average housewife as do frozen poultry, fruits, etc., and are actually more difficult to cook properly than fresh cuts.



Close-up of a Milgram case shows the attractiveness of both package and label, as well as neat arrangement of the case.

BAGGED ORANGES

Despite the unquestioned sales appeal of citrus in mesh bags, shipping problems cause some California growers to move cautiously in the pre-packaging trend

1. Open-mesh bag with woven-in label adopted by Sunkist is typical of packages used by California orange shippers. Sunkist, moving cautiously on pre-packing, uses this bag mainly for intrastate shipment, encourages Eastern dealers to do their own bagging. PHOTO, SUNKIST.

To bag or not to bag is the question that is harrassing California packers of citrus fruit, now that the removal of wartime shortages makes feasible a resumption of the practice of pre-packaging fruits in open-mesh bags for bulk consumer purchase.

Before the war, pre-packaging in mesh bags was more widely prevalent among Florida shippers than in the California field and at least one major West Coast resource thinks that the same basic reasons which underlay California's resistance to bagging before the war should indicate a cautious approach to adopting the practice now.

On the other hand, many of the independent packers have bagging operations in full swing and are sufficiently encouraged by results to plan expansion of the practice.

There is no difference of opinion about the sales advantages of bagged oranges. Offered at the retail level in open-mesh bags of 5-, 7- and 8-lb. capacities, small oranges show a substantial increase in sales volume. The housewife, offered oranges conveniently bagged and visible for inspection, buys more this way than if the fruit is offered loose. With more oranges on hand, she serves her family more oranges—and more frequently—and consumption is increased. The only marked difference of opinion in the California area is whether the bagging should be done by the packer or by the retail dealer.

The Granada operation

Chief California proponent of bagging oranges by the packer is Frank Belmont of the Granada Packing House at Anaheim, who currently has 14 bag-packing units in operation and who intends to expand to 20 eventually.

Acknowledged within the trade to be the operator who has most successfully met the problems of pre-packaging oranges, Mr. Belmont has solved one of the knottiest problems—that of a mother container for the mesh bags—through use of an outsized wirebound box. This container (Fig. 6) appears to be an enlarged version of the wirebound Bruce box, with outside dimensions of $13^1/_4$ by $27^3/_4$ in. as against the standard 12 by 26 in. It enables the packing of 14 5-lb. bags, 10 7's or nine 8's for a total of around 70 lbs. net weight of fruit per box. The gross is about 80 lbs. Under tariff regulations the container is classified as "irregular" and must be paid for at actual weight, but this is no handicap in view of the fact that the standard box has an 85-lb. billing weight.

An important advantage of the wirebound container is that the mesh-bagged oranges carry better due to better air circulation through the container in the refrigerated car (Fig. 8).

Center of the Belmont operation is a series of automatic weighing machines (Fig. 2), with one girl operator to handle two machines. Oranges rolling down a belt are diverted into an aperture which opens automatically after a bag has been placed to catch the flow (Fig. 3). An automatic weighing device controls the

2. Over-all view of bagging line at Granada Packing House. Each of the girls handles two of automatic fillers and hangs filled bags on conveyor hooks.

PHOTOS, GRANADA PACKING HOUSE.

flow of oranges into the bag and shuts off when the desired weight is reached. This automatic shut-off has two stages: one foil closes when about 95% of the weight has been attained and the other when full weight is reached.

The filled bags are then placed by the packers on the hooks of an endless conveyor chain, suspended by their string ties. The bags move on the conveyor (Figs. 4 and 5) through an automatic stapler for closing. At the end of the conveyor they hit an automatic trip and drop gently to a padded table top similar to the padded bins customarily used in the Western canteloup industry.

The bags are taken from the padded table by the master container packer, who places them in the wire-bound shipper which is immediately closed and trucked out to the car. Currently, loading of the shipping containers is running from 490 to 595 oranges, as against a range of 561 to 800 for the standard boxes.

Mr. Belmont has 14 bag-packing units now operating and expects soon to have 20 handling six to eight cars daily. Originally there were many requests for mixed cars, but repeat orders have centered mainly on straight cars of the bagged oranges, Mr. Belmont says.

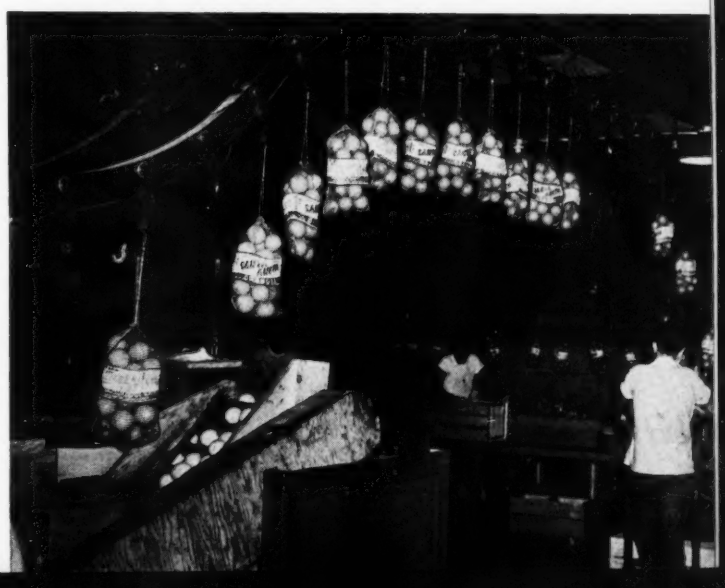
He has been packing both 8-lb. and 5-lb. sizes, finding that independent receivers prefer the eight-pounders and the chain stores the five-pounders. Only fancy grade oranges in the No. 288 to 344 size are bagged, the No. 252 and larger being packed in standard boxes.

Bagging of oranges and grapefruit has also been undertaken by the Mutual Orange Distributors, Redlands, Calif., shippers of "Pure Gold" brand, who have some 21 packing houses scattered through the citrus-producing area of the state. According to Robbins Russell, general sales manager of Mutual, this method of marketing citrus has stimulated and increased sales 40%.

Other packing houses shipping bagged oranges in

3. Close-up of operation. Automatic weigher controls flow of oranges from conveyor to bags, suspended on filler under transparent plastic guards. This girl, head bagger, operates switches to control belt supplying fruit to entire line.

4. Conveyor elevates over aisle for headroom.



5. Packing table at end of conveyor line. Automatic stapler for bag closing is at far right. At end of line, automatic trip drops bags onto padded table, from whence they are loaded by hand into wirebound crates, ready for shipment.

6. Frank Belmont, proprietor of the Granada Packing House, demonstrates the use of rocker closure which engages closing loops on crate.

wirebound crates include The Borden Fruit Co., The Orange Belt Fruit Distributors, W. A. Snyder & Sons, B. G. Rooke Packing Co., The American Fruit Growers, Inc., and California Fruit Distributors. To date over 1,000,000 crates for bagged oranges have been used. According to the crate manufacturer, numerous inquiries from Texas indicate this method of packaging and marketing oranges and grapefruit is growing in favor.

Sunkist moves cautiously

Despite the sound case histories offered by Granada and other shippers and the plans for expanding pre-packaging equipment, the California Fruit Growers Exchange, which merchandises under the Sunkist brand name and is responsible for approximately 75% of the oranges shipped out of California, is moving very slowly on the bagging problem.

Sunkist's board of directors has approved the mesh-bag packaging of its fruit on an experimental basis, for intrastate shipment only. Their spokesmen do not argue the merits of offering the consumer bagged fruit. Nor do they go out on a limb and categorically state that Sunkist will never ship pre-packaged fruit interstate. They are, of course, very responsive to dealer demands and concede that if their tests warrant it, they will expand their bagging. But they gravely doubt that their fruit will reach its destination in as good condition pre-packaged as it does in boxes. And because of the vast investment tied up in the Sunkist brand name, they are reluctant to gamble.

Sunkist had an unhappy wartime experience with bagging fruit, which according to D. M. Anderson, director of information, may condition their thinking on the current problem. When packaging cases were not obtainable, Sunkist shipped to the dealer in 42-lb. bags. The inadequate protection afforded the fruit through this manner of shipment resulted in costly spoilage. While Mr. Anderson admits that pre-packaging for the consumer differs from this type of bulk bagging, in that the individual small bags are shipped in a mother container, he points out that such a container is usually uncovered at the top so that containers at the bottom of a car suffer from pressure and that loose grouping of bags in a container does not assure the protection of symmetrically packed fruit in a case.

Shipping consideration

The average carload of California oranges travels 2,500 miles, as contrasted with a 1,000-mile average for the Florida product. This differential (plus the fact that Florida oranges are allegedly more resistant to bruising) explains California's prewar resistance to consumer bagging of oranges and Sunkist's current caution. Every mile of travel increases the hazard of damage en route.

Almost as important as this factor is the fact that when oranges are pre-packaged, it is difficult for the dealer to eliminate the oranges which may have spoiled en route. No matter how carefully the fruit is screened before bagging, citrus fruit is perishable and an orange gone bad is bound to show up occasionally. When this

happens the dealer finds that bagging has turned out to be a time waster for him rather than a time saver. He has to open the stapled bag, take out the spoiled fruit and either toss the remainder of the fruit on the open racks for small-unit sales or make a replacement and restaple with whatever equipment he has at hand.

In citing these problems Sunkist does not imply that the smaller packers who are pre-packaging oranges today are irresponsible about the condition of the product on arrival, but they point out that in the case of unbranded fruit or fruit with a brand name that does not bear the costly exploitation burden of Sunkist, an occasional mishap is not so disastrous.

There are other liabilities in pre-packaging at the packer's level, according to Sunkist. For one thing because of the loss of weight in oranges due to evaporation in the skin, each bag must be packed with an extra pound of oranges beyond the specified weight. Furthermore, they say, the additional cost of pre-packaging comes to approximately 60 cents per box. Since pre-packaging is limited primarily to small oranges and since small oranges are not currently a profitable item in the Sunkist repertoire, anything that adds to the cost is looked upon with considerable misgiving.

Yet despite all these disadvantages, Sunkist does not want to place itself in the position of bucking a trend, so the door has been opened for pre-packaging. Whether or not oranges are bagged is left optional with the individual packing houses who are members of the cooperative. No special equipment has been developed for Sunkist's use; they are working with adaptations of machinery manufactured for the bagging of potatoes. Currently only the 7- and 8-lb. bags are being used. All bags have the Sunkist emblem woven in (Fig. 1).

Results of the intrastate experiment are being carefully watched; as a matter of fact, when a specific request is received Sunkist will even ship pre-packaged oranges out of state.

During the interim period Sunkist, recognizing the undeniable selling advantages of the bagged fruit, is energetically attempting to educate its dealers to accept small oranges in cases and to bag them after arrival. A Sunkist ad currently running in wholesale and retail trade papers (Fig. 7) pictures a range of bags available from national bag companies and makes a strong plea for bagging at point of sale: "When bagging is done nearest the selling level, your customers are certain to get quality fruit packed to their liking. You escape customer complaints and the costly job of reconditioning spoiled fruit."

Logically, Sunkist would like to go one step further and stimulate dealer bagging by providing them with Sunkist-labeled bags. Here again they are hobbled by the intangible values surrounding the Sunkist name. It would be impossible to police dealers to make sure that only Sunkist oranges were inserted in the bags and the valuable consumer loyalty to Sunkist would be damaged if inferior oranges were sold in the bags.

Of course, if the dealer does the bagging, the danger of damage en route is removed, as is the problem of replacing spoiled oranges within an individual bag. Equally important, Sunkist will have dodged the additional expense of bagging. As long as the sale of small oranges is a red-ink operation, the prospect of increased volume means only more red ink to Sunkist. They hope instead that dealers, spurred by an increased demand for small oranges, will be willing to pay a higher price per box for them. If that is achieved all other resistances to pre-packaging will probably melt away.

CREDITS: *Mesh bags, Bemis Bro. Bag Co., St. Louis, and Chase Bag Co., Chicago. Granada Packing House equipment: automatic weighing devices designed and built by Frank Ahlberg Co., Los Angeles; conveyor system by The E. W. Buschman Co., Cincinnati; stapler by Bostitch, Inc., East Greenwich, R. I.; wirebound boxes by Linnton Box Co., Portland, Ore., and Martin Bros. Box Co., Los Angeles, Calif.*

7. With this ad in produce trade papers, Sunkist makes a strong plea for bagging at point of sale, which it believes to be safer.

How to Get Volume on Small Size Oranges
California Valencias are running to small sizes (mostly 288s and smaller) this summer.
There's no problem in moving small size oranges when you sell them in large units. Bags containing two or three dozen make this easy.
Sunkist believes bagging is most successful when done as close to the point of sale as possible. Here's why: Sunkist Oranges are shipped from California in rigid, fully-packed containers. This has proved to be the surest way to get the fruit to you in top condition. When bagging is done nearest the selling level, your customers are certain to get quality fruit packed to their liking. You escape customer complaints and the costly job of reconditioning spoiled fruit.
To assure yourself normal orange turnover and profits this summer, buy small sizes. Bag 'em—ideal self-seller for self-service. Feature in big displays, price in large units and advertise them as "JUICY SMALL ORANGES—Best Buy Now."
SOURCES OF BAG SUPPLY: Get in touch with local representatives of national bag companies.
CALIFORNIA
Sunkist
ORANGES

8. Granada finds that good air circulation through crates and bags insures arrival of pre-bagged oranges in good condition. View shows face of typical load at doorway of refrigerator car.

Colonial's rooster

Down in Virginia the word "Colonial" is an appropriate and popular name used by many types of businesses, often associated with symbols of Georgian doorways or of young ladies in crinolines.

When a leading designer, commissioned to create a distinctive trade symbol for Colonial Stores, Inc., revealed a drawing of a rooster at the chain's head offices in Norfolk, Colonial's management hit the roof.

In no uncertain terms the designer was told that if that was the best he could do, he'd better take his blankety-blank drawings back to New York.

About that time Fate stepped into the picture. A big truck operated by another Colonial firm had the misfortune to overturn on the highway. Photos of the upset trailer made front-page news. The chain-store officials were besieged with inquiries about an accident that wasn't theirs.

Immediately the wisdom of the rooster symbol, distinctively created with the identifying letters "CS," made sense.

In the company's headquarters in the city of Norfolk, a Colonial theater, a Colonial restaurant, a Colonial antique shop, a Colonial beauty shop, a Colonial candy shop, a Colonial florist headed up a seemingly endless parade of Colonial businesses.

If the company was to have a new trademark then it should be an unforgetable symbol that would set Colonial Stores, Inc., and its private Colonial brands apart from all others. The rooster appeared to have those qualities. In fact, it would provide an identifying mark that could be protected on many private brands where it would be impossible to use the name Colonial because of prior use by others.

A few days later it was the company president—not the designer—who took the CS rooster before the board of directors with something to crow about: "Here's a bird everybody will know!" "After the American Eagle, we'll have the best known bird in the land!"

That is how the CS rooster trademark was introduced as the mascot for 410 stores operating in five South Atlantic states under Colonial management and has been adopted as a distinguishing symbol on hundreds of private-brand food packages. It also brings into the CS family private-brand products sold in all the Colonial stores—the large supermarkets and the smaller clerk-service stores—known under the names of Pender and Rogers.

Colonial Stores feature complete lines of nationally advertised and established brands, but this new packaging program is an important step in focusing promotional attention on private-label merchandise so vital today in chain operations to build exclusive customer trade.

The packaging and labeling program divides itself into two categories: a redesign of those packages to incorporate the rooster trademark on certain private-brand products already well established in Colonial stores and that are to be retained; new designs for new lines of quality products which the company is introducing. In canned fruits and vegetables this will mean new labels on which the CS rooster will be the chief mark of identification with no other reference to the name Colonial than the simple statement, "distributor, Colonial Stores, Inc., Norfolk, Va.," on the legally required informative panel.

Examples of the former are Colonial's egg cartons. Grade A eggs are sold under the brand "Pick of the Nest." This carton has been modernized in design with an identifying color for large or small eggs, but incorporating the symbol of the rooster to associate the cartons with the CS family.

The trade symbol is remarkably flexible in its color handling. No set color pattern has been specified for the use of the rooster. He may be handled in any one color, or any two colors, or in a combination of solid color and Ben-Day screen, or all Ben Day. This offers the opportunity to use many color schemes on the packages, which add to eye appeal and variety of the family. For instance, in the bread packaging there is a different color scheme for each kind of bread. Blue and red are used for "Our Pride" enriched white bread; orange and brown for whole wheat; purple and blue for raisin. Colors are used generously on the bread packages, which adds immensely to their attractiveness in mass display. End labels give further identity and display value when the bread is stacked on the shelves. All cartons and tray packages for baked goods are being redesigned as members of the big new family, with the

Unique trademark gives distinction to much-used name, pulls attention to Colonial Stores' private brands

TOMATOES
Packed from carefully selected ripe tomatoes of a uniform red color, and are mostly whole.
OLD FASHIONED STEWED TOMATOES
2 slices bread
1 No. 2 can tomatoes
2 tbsp. butter
1 tbsp. sugar
Salt
Pepper
Cut bread into cubes, combine all ingredients and simmer gently until thoroughly heated. Avoid long cooking. Six servings.
TOMATOES WITH VEGETABLES: Add a cup of left-over vegetables to the above recipe. Corn, peas, lima, green, wax or soy beans may be used.
TOMATOES
WITH ADDED TRACE OF CALCIUM SALTS
TOMATOES
WITH ADDED TRACE OF CALCIUM SALTS
UNIFORMLY RED
Seasoning . . . . . Salt
CONTENTS . . . . . 1 lb. 3 oz.
Can Size . . . . . No. 2
Cups, Approx. 2½
Servings, Average . . . 4-5
DISTRIBUTOR
COLONIAL STORES
INCORPORATED
NORFOLK, VA.

Sample of label for can of whole tomatoes. CS rooster is identifying trademark with no other reference to Colonial than that Colonial Stores, Inc., are distributors. All labels are designed in accordance with government specifications and 40–40–20 ratio of label space recommended by the National Canners' Assn.: 20% for legal requirements—contents, size, servings, etc.; 20% for description and menu information; 40% for display, illustration and promotion presented any way packer chooses. Labels, courtesy Muirson Label Co. Inc.

Products contained in each can are pictured with utmost accuracy on each label. What is called "window" or "porthole" technique is used. Actual contents are shown in a circle as though the consumer is looking into the can. Peas, for instance, are the same size in the picture as they are in the can. Samples of peas in each pack were actually calipered to assure size accuracy for the picture on the labels.

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exception of one group which is being retained under the Dolly Madison name, but modernized in design.

On flour sacks the CS rooster appears in red and dark blue on a large white background area. Here he is the dominating element on the face of the packages with the word flour and the type of flour prominently showing below the bird.

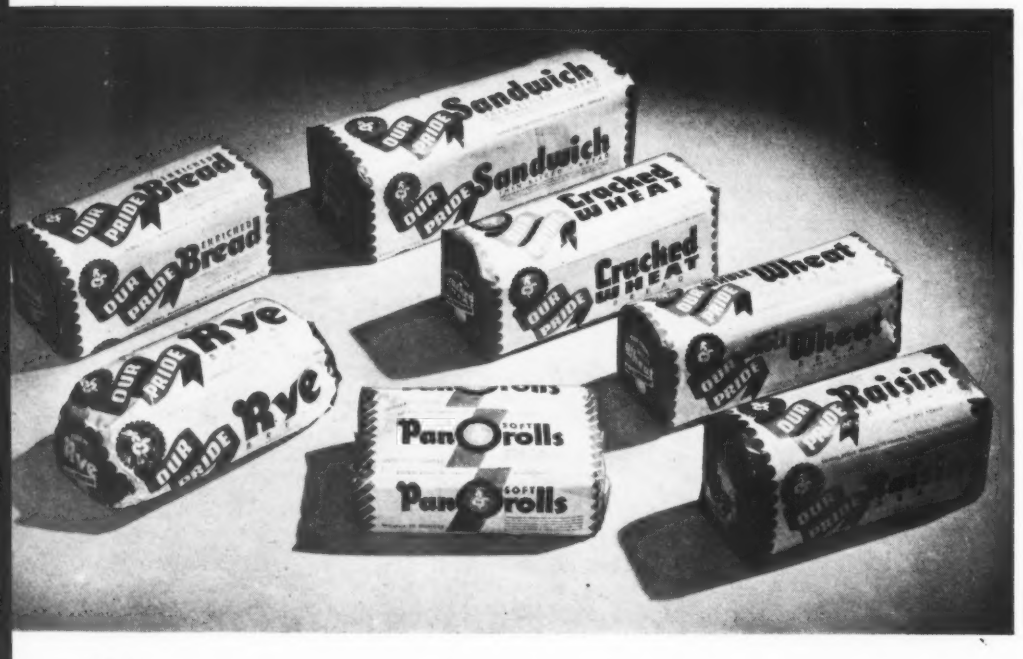
In the planning of the new canned-fruit and vegetable labels, every effort has been made to satisfy requirements for the best possible descriptive labeling. All of these labels are being designed in accordance with government specifications and the 40-40-20 ratio of label space recommended by the National Canners' Assn. In other words, 20% of the label contains information specified by law—including description of product, contents, size of can, address of distributor, but no promotional copy; 40% contains information for the consumer—recipes, etc., and 40%—the face of the package—includes illustration, display and promotional information in the manner the company has chosen to present it.

A product group illustrating how the rooster imparts quick identification wherever it is used. CS letters are blue; head and tail red.

"Porthole" pictures

The chief aim of Colonial management and the designer has been to present by pictorial illustration, just as accurately as possible, the product contained in each can. What is called a "window" or "porthole" technique is employed. Each illustration is made to look as though it is an actual window or porthole through which the consumer actually sees what she is buying. For instance, on a label for a can of peas you see, in a circle, a picture of the peas. This picture is so realistic that the peas shown are the actual size of those you get when you open the can. In fact, a large sample of the peas in each pack were measured with a caliper to assure size accuracy for the label pictures. Canned whole tomatoes, beets, string beans, whole peaches, apricots and other whole fruits and vegetables are also shown in actual size. Every attempt has been made, too, to present these products as near to actual color as is possible within the limits of color printing.

For a product such as canned applesauce, however, which might not be quickly recognizable in a picture, the actual color illustration of the applesauce is shown in the "porthole" beside a picture of a rich red apple to further identify the product. Creamed corn and whole-kernel corn are illustrated in the same manner. That is, an ear of corn is included beside the "porthole" picture of the actual product. In fact such treatment is given in every case where the product might not be



A bright, distinguishing color scheme for each kind of bread lends variety and eye appeal for counter display. Colors are used generously and end labels give further identity when packages are stacked on store shelves.

The whole line of Colonial bakery products is appearing in redesigned packages. Those sold under the CS label carry the rooster theme. Others will be packaged under company's Dolly Madison brand, modernized in design.

Gold Label tea and Gold and Silver Label coffee do not carry the CS rooster, but have been redesigned with monogram lettering that associates them in feeling with the CS family. Egg cartons carry the company's private brand, "Pick of the Nest," but are identified with the company's rooster symbol.

easily identifiable in a picture showing it in the prepared state.

The importance of this principle to the shopper and the consuming public is illustrated by a simple test which the designer tried out on his own cook. He presented her with a can of pineapple on which he had made a dummy label showing a beautiful color painting of a whole pineapple. Across the picture of the pineapple he placed a huge white strip on which he had sketched in inch-high letters the word, "sliced." The can was shown to the cook for a few minutes, after which he asked, "Alberta, what kind of pineapple is in that can?"

Even with the huge letters that said "sliced," Alberta could not say whether the can contained sliced, diced or a whole pineapple; in fact, she thought it was a whole pineapple.

Many shoppers, of course, would examine their purchases more carefully than Alberta, but this test was an indication to the designer of the basic need for presenting pictorial information on a label so simply and so accurately that there can be no chance of a mistake in selection.

The only products in the whole program which do not carry the CS rooster are the company's Gold and Silver Label coffees and its Gold Label tea. These brands have been known so long that it was felt a modernization of the design to improve shelf appeal with the treatment of the GL for Gold Label in a monogram to associate the brand name in design feeling with the CS rooster would be most effective from a sales standpoint.

In its program for the expansion of CS private-label brands, Colonial is emblazoning its store fronts, its trucks and trailers and all other advertising with the new CS trademark as its symbol of service, "Courtesy—Satisfaction." The rooster has also provided a theme for a live rooster crowing over 60 radio stations in the territory served to announce, "When he's crowing, then you'll be knowing . . . Colonial is on the air!"

It is too early to give actual sales figures on the effectiveness of the CS rooster packaging program since it was announced in widespread promotion only during the last few months. An interesting reaction, however, is the immediate effect it is having on employee morale.

Everywhere Colonial employees have been commenting on the attractive new packages. Their attitude is that in such good packages, the products have to be good and they are eager to sell them. And that's what makes the wheels go round in the right direction.

CREDITS: *Design program, Jim Nash, New York. Can labels, Muirson Label Co., Brooklyn, N. Y. Coffee bags, Thomas M. Royal & Co., Philadelphia. Flour bags, Bemis Bro. Bag Co., St. Louis, and Fulton Bag & Cotton Mills, Atlanta. Bread wrappers and end labels, Marathon Corp., Menasha, Wis. Egg cartons, Self-Locking Carton Co., Div. of Shellmar Products Corp., Chicago. Tea cartons, The Gardner-Richardson Co., Middletown, Ohio.*

DESIGN

PAPER BELLOWS

This bellows package for Mon Rose DDT powder marketed by John Laird & Son, Ltd., Glasgow, Scotland, is made entirely from paper and paperboard. Printing is done directly on the board, thereby saving the extra operation of gluing cover paper to the board. The construction is in two sections, both made of two-ply tubing. One end of each section is beaded with a disk inserted. The inner tube is fitted with rings. When ready for use, a hole is pierced in top of the package. Bellows action, obtained by a special patented method, results in a continuous spray rather than a sprinkle of powder. To work the drum, one hand holds the lid portion while the other works the bellows. The package is filled simply by removing the lid, loading the box with powder and replacing the lid. Known as the "Puffin Drum," this container was shown at the Scottish Exhibition, "Enterprise Scotland," which was held in Edinburgh recently.

BRIGHT-STRIPED CUP

One of a number of items in the Beatrice Creamery Co. line to be redesigned (see "20th Century Heraldry," MODERN PACKAGING, April, 1947, p. 106) is the "Fillup" ice-cream package. Since this is a juvenile item, the container was designed for greater eye appeal for children. The new cup-type container with tabbed lid is printed in bright red and white barber-pole stripes, whereas the old package was a pail-type carton printed in pale blue with dark blue lettering. The new-type container has the advantage of easy opening and facilitates eating directly from the package. By keeping a similar style of lettering for the product name, recognition value has been retained. Note that the words "ice cream" have been added to the container face, while the price marking has been switched to the lid and is prominently displayed in large type.

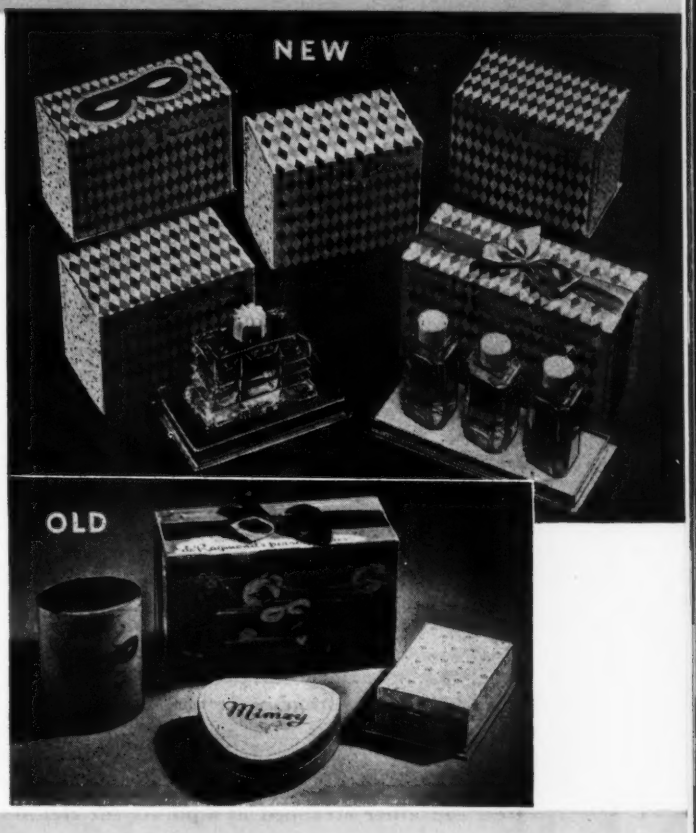
Credits: *Design, Harper Richards, Chicago. Container, Mono Containers Div., Continental Can Co., Newark, N. J.*

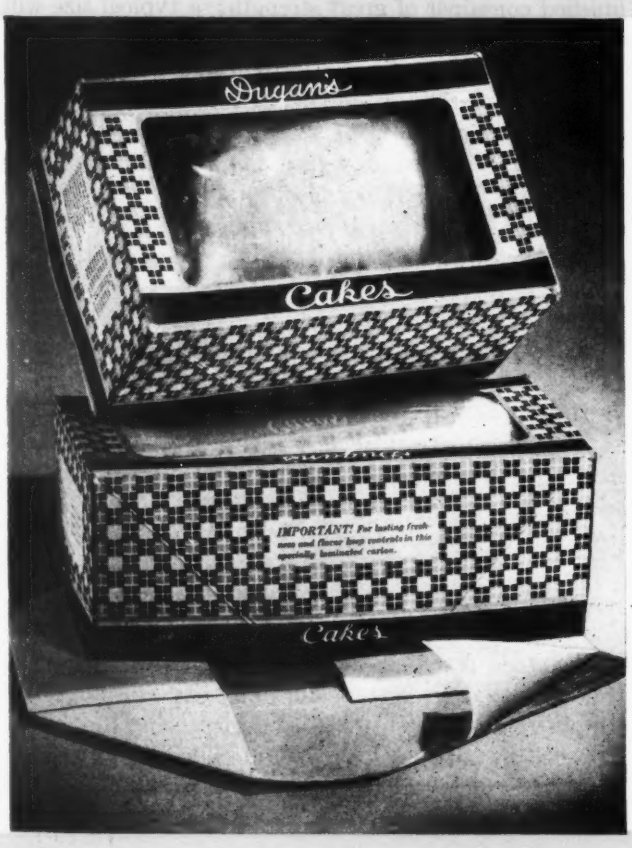
HISTORIES

CARNIVAL DRESS

Creation of a single motif for all fragrances makes for easy identity of all products in the Parfumerie de Raymond line. New carnival-dress treatment is equally fitting for each perfume name, yet distinctiveness for each fragrance is provided through difference in coloring and side design of the embossed cover paper. Diamond design of cover paper is in two colors against white background for each container. Mask design and satin-ribbon tie provide added distinction for two fragrances. Name of the perfume scent appears in the upper right corner of each box. The private-mold bottles have urea caps, the swirl caps being of private mold.

Credits: ***Design, Gilbert D. Snyder, New York, Set-up boxes, Shoup-Owens, Inc., Hoboken, N. J. Printed cover paper, Ar-Kay Printing Co., New York. Bottles, T. C. Wheaton Co., Millville, N. J. Private-mold caps, Victor Industries Corp., Brooklyn. Stock-mold caps, Colt's Patent Fire Arms Mfg. Co., Hartford, Conn.***



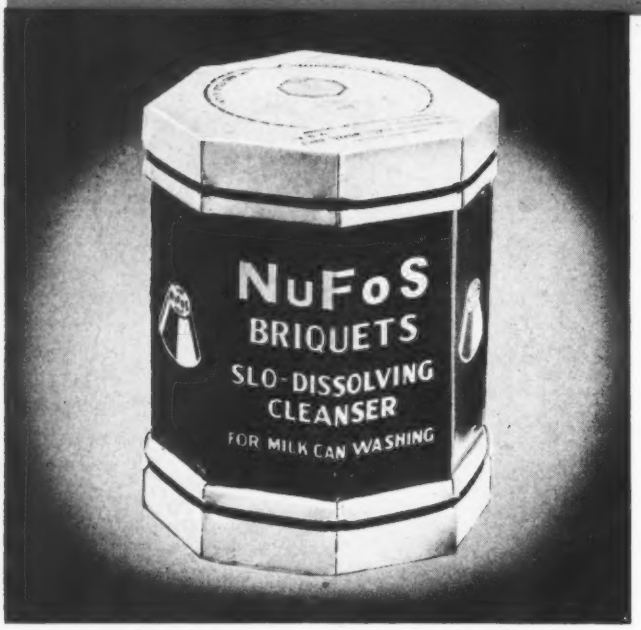


FRESHER CAKES

New protection is given to bakery goods by these improved cartons made with an inner lamination of greaseproof, waxed paper. Dugan Bros., Inc., Newark, N. J., is now using these cartons for its wide line of boxed cakes and doughnuts. The company has made a consumer promotion feature of the improved carton by calling attention to this new protection in copy on one panel of the package that reads: "Important! For lasting freshness and flavor keep contents in this specially laminated carton." The identifying Dugan checkerboard design in two shades of blue on white has merely been mortised to allow a white panel where this new "sell copy" is placed (see illustration). It is believed this package improvement also encourages the buyer of the bakery goods to use the box as a shelf container. Face of the package has a transparent window.

Credit: ***Carton, Container Corp. of America, Chicago.***

CORRUGATED



1. Multi-sided construction, locking ends and steel strapping lend strength. This container has dispenser top, opened by cutting, to produce a fold-back flap without breaking metal bands.

2. Bigelow-Sanford ships carpets in three-section container strapped at 8 points for rigidity.

A new type of multi-sided corrugated fibre shipping drum, developed just prior to World War II but held to limited use during the war period by the shortage of paperboard, is now being employed for a number of products where its unusual design and versatility offer special advantages.

The container found ready application in the shipment of bulk products and chemicals when first introduced and is now finding its way into a wide range of other applications. Products currently being shipped in the container include low-temperature storage units for food products, cleaning compound, rugs, photographic chemicals and box-toe material for shoes. Largest item being shipped in this type of container is a gas furnace.

The intended use of a particular container of this special type determines the strength of fibreboard to be used, the size and shape. The containers can be octagonal, hexagonal, rectangular or square, depending on the specific product and shipping requirements. Lids and bottoms are identical units, with wide flaps which double under similar flaps on the body of the box to form a joint which cannot be pulled apart after steel strapping is applied. Design and construction result in a finished container of great strength; a typical size will support a ton of static weight.

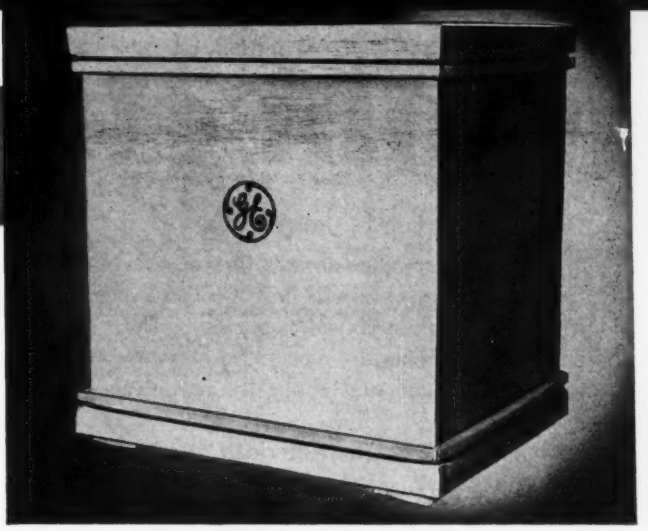
The container is shipped to the user's plant knocked down flat, offering an important saving in floor space and shipping expense. A carload of several thousand containers, knocked down, occupies no more space than a few hundred barrels or round set-up drums. High-speed setting up is accomplished with a simple mandrel which holds the flaps in proper position for fitting together and strapping.

The container can be readily disassembled by the ultimate user so that it can be returned to the supplier for many round trips. Four thicknesses of overlapping corrugated board at the point where the lid joins the body provide extra strength where it is needed, also creating a convenient hand grip for lifting. When printed strapping is used, the unit is also pilferproof, as any break in the seal is apparent.

Typical packs illustrated herewith indicate how the unit may be varied to suit individual product and shipping requirements. As used by The Mathieson Alkali Works, Inc., for shipping this firm's NuFos Briquets, a slow-dissolving cleanser for milk-can washing, the container (Fig. 1) is fitted with a dispensing top which is opened by cutting along the dotted line to produce a flap that is folded back to permit pouring of the contents.

DRUM

A new type of shipping container, with joints locked by wire strapping, shows great strength and versatility in the handling of a wide variety of products



3. Same type of container made in square form is used for General Electric food-freezer units.

ALL PHOTOS, GAYLORD CONTAINER CORP.

4. Two different shapes, both eight-sided, used by United Shoe Machinery for box-toe material.

Bigelow-Sanford Carpet Co., Inc., utilizes a "king size" three-section container (Fig. 2) for shipment of rugs. Steel strapped at eight points, this unit is of octagonal cross section, providing sufficient rigidity to prevent twisting and bending and insuring adequate protection of the rolled rug within.

For shipment of low-temperature food-storage units, General Electric Co. employs a square adaptation of the container (Fig. 3) with wooden skids. Lid and bottom are held in position by steel strapping.

Two styles of the container, one having an octagonal cross section and the other rectangular with corners beveled, are used by United Shoe Machinery Corp., Boston, for shipments of box-toe material. These containers (Fig. 4) also illustrate how the hard, bright kraft surface lends itself to printing for increased eye appeal and advertising value.

An octagonal type of container (Fig. 5) used by Agfa Ansco for 25-lb. shipments of sodium sulphite anhydrous utilizes an applied printed label, while horizontal bands around the flange of the lid and bottom give the package a distinctive appearance. For very fine powdered products, the container can be fitted with top and bottom trays that form a siftproof seal when the steel strapping is applied. If the product to be packaged requires protection against moisture, moistureproof liners can be used.

The versatility of the container ideally adapts it for such items as soap chips, granular or powdered chemicals, sweeping compounds, food products, small plastic parts, bottle caps, electrical supplies, wire, paper or fabric rolls and other types of products requiring special protection against rough handling and the elements. The design of the container is patented and has not as yet been licensed to other box manufacturers.

5. For powdered products, container can be fitted with top and bottom trays that form a siftproof seal when steel strapping is applied. Moistureproof liners also can be used in the container.

CREDIT: *"Drumpak" containers developed and produced by Gaylord Container Corp., St. Louis.*

PRODUCE WASTAGE

Government survey of waste and spoilage of non-packaged produce at retail level lays groundwork for further development of pre-packaging on sound economic basis

by DONALD R. STOKES*

Waste and spoilage loss is one of the main cost items in retailing fresh fruits and vegetables. While opinions differ considerably as to the extent of these losses, it is generally agreed that the country as a whole would benefit materially by reduction of such waste.

In cooperation with the American Stores Co., Philadelphia, the Bureau of Agricultural Economics made weekly spot checks of waste and spoilage losses in four bulk stores in northern New Jersey which operated their fruit and vegetable departments without refrigeration equipment. These spot checks were made in the year beginning in Dec., 1945, and ending in Nov., 1946.

Weekly records of two stores in Philadelphia having refrigerated display cases were taken in April and June, 1946, and Jan. and Feb., 1947. Weekly records of two stores in northern New Jersey in which prepackaged produce was merchandised under refrigeration also were taken and these results will be shown in a later report.

The average rate of loss in retailing fresh fruits and vegetables, as measured in this survey, amounted to 6.9% of the retail value of the produce handled. The average loss on fruits was 6.6%, on perishable vegetables 8.5% and on "hardware" vegetables 2.9%. Most of this 6.9% loss was garbage loss which amounted to 4.3%. Mark-down losses amounted to 1.5% and the concealed waste loss 1.1%.

Can pre-packaging of produce pay for itself in reduction of waste and spoilage? On just what items and at what seasons and under what conditions will it be most effective?

The answers to these basic questions will determine the whole future of packaging in the produce field—but until now there has been no comprehensive data on which to base decisions.

The first step obviously is to determine exactly what losses in waste and spoilage are suffered by retailers on non-packaged produce, refrigerated and non-refrigerated. This article is a report by the U. S. Dept. of Agriculture on a two-year survey and study which constitutes that first step. It will be followed by a similar study of the performance of packaged produce, from which definite conclusions can be drawn.

The preliminary survey is presented here in condensed form for its value to the many elements of the packaging field who are vitally concerned with the potentialities of pre-packaging. Copies of the complete preliminary report and statistical supplement may be obtained from the Bureau of Agricultural Economics, Department of Agriculture, Washington, D. C.

Methods used

The following method was used to develop weekly store records: The inventory on hand at the beginning of a week was taken. Daily receipts of produce were determined by weighing or counting the quantity received. A final inventory was taken at the close of business at the end of that week. By subtracting its retail value from the retail value of the inventory at the beginning of the week plus receipts during the week, the potential retail sales value of each commodity was determined.

Three kinds of waste and spoilage were recorded: (1) The "concealed loss." This included losses in the shipping containers in which produce was sent to the store. For instance, if 15 lbs. of a box of tangerines arriving at the store were spoiled, this was recorded as concealed loss. (2) "Mark-down loss." This is the difference between the prevailing retail value of the produce and the price at which it was sold. For example, if apples were billed to the store for sale at 15 cents a pound, but because of slight decay and handling damage were sold at 10 cents a pound, a mark-down loss of five cents a pound was recorded. (3) "Garbage loss." This is the value of the produce which spoiled in the store and was completely discarded.

The three kinds of losses give the total losses in handling each commodity. The value of the loss of a commodity, divided by the retail extension value[1] gives the percentage loss. This should not be confused with the ratios of spoilage to net sales. Carrot tops, beet tops, etc., discarded at the customer's request, were not

* Agricultural Economist, Bureau of Agricultural Economics, U. S. Dept. of Agriculture, Washington, D. C.

[1] Retail expansion value is the cost of the produce plus the anticipated gross margin—sometimes called mark-up. The retail extension value usually differs from the actual recorded sales due to waste and spoilage losses, errors in weighing and pricing and other factors.

WASTE AND SPOILAGE LOSS OF FRESH FRUITS AND VEGETABLES, DECEMBER 1945 – NOVEMBER 1946

AVERAGE WEEKLY LOSS OF PRODUCE, HANDLED IN BULK AND NONREFRIGERATED, BY COMMODITIES AND TYPE OF LOSS, IN SELF-SERVICE FOOD STORES, NORTHERN NEW JERSEY

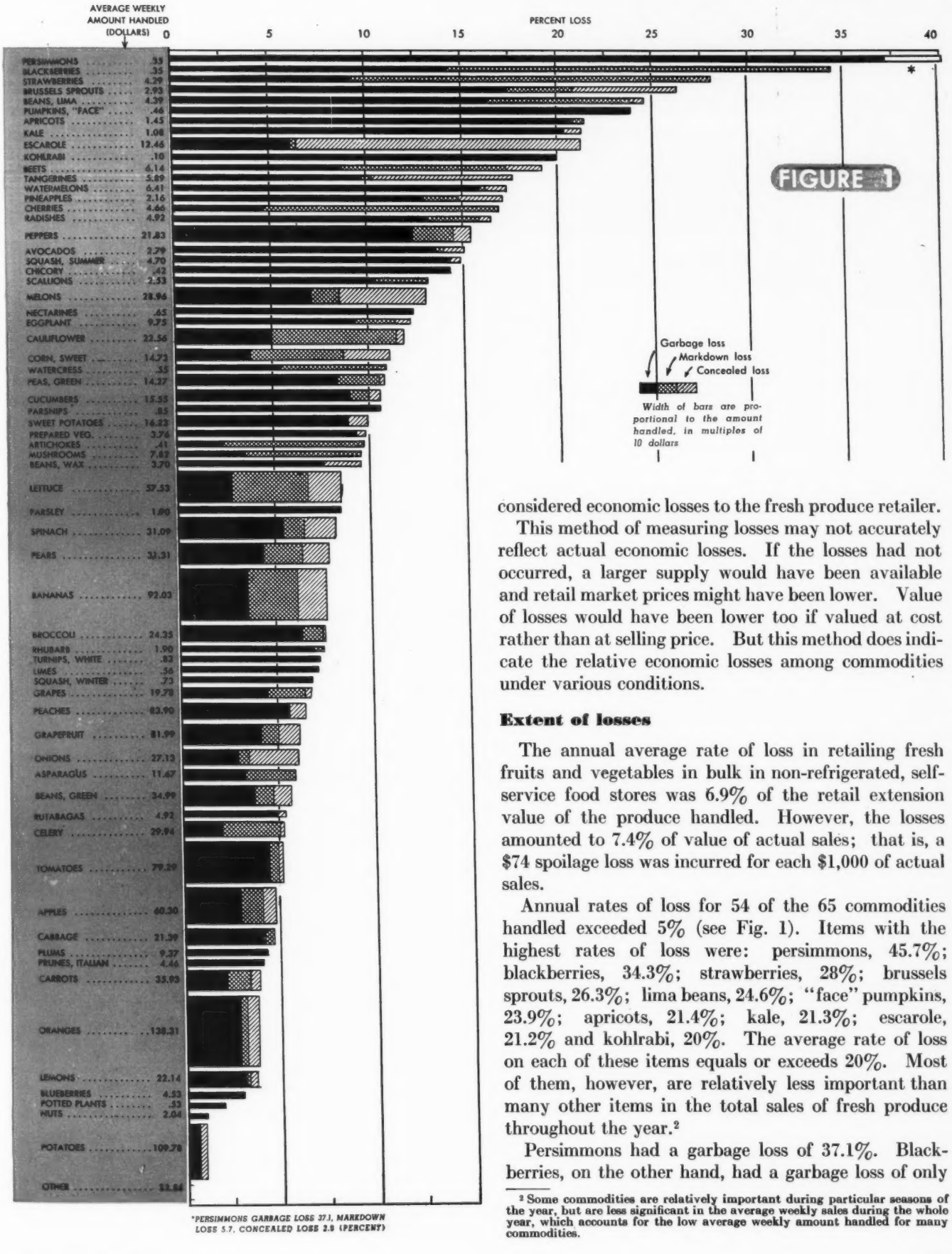


FIGURE 1

*PERSIMMONS GARBAGE LOSS 37.1, MARKDOWN LOSS 5.7, CONCEALED LOSS 2.9 (PERCENT)

considered economic losses to the fresh produce retailer.

This method of measuring losses may not accurately reflect actual economic losses. If the losses had not occurred, a larger supply would have been available and retail market prices might have been lower. Value of losses would have been lower too if valued at cost rather than at selling price. But this method does indicate the relative economic losses among commodities under various conditions.

Extent of losses

The annual average rate of loss in retailing fresh fruits and vegetables in bulk in non-refrigerated, self-service food stores was 6.9% of the retail extension value of the produce handled. However, the losses amounted to 7.4% of value of actual sales; that is, a $74 spoilage loss was incurred for each $1,000 of actual sales.

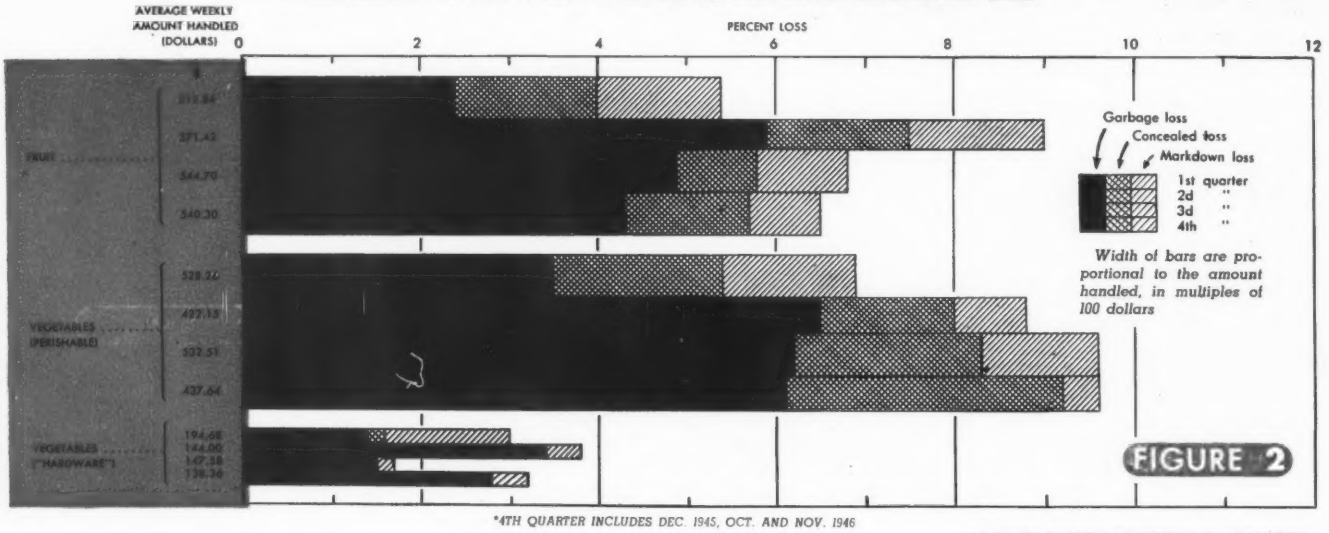
Annual rates of loss for 54 of the 65 commodities handled exceeded 5% (see Fig. 1). Items with the highest rates of loss were: persimmons, 45.7%; blackberries, 34.3%; strawberries, 28%; brussels sprouts, 26.3%; lima beans, 24.6%; "face" pumpkins, 23.9%; apricots, 21.4%; kale, 21.3%; escarole, 21.2% and kohlrabi, 20%. The average rate of loss on each of these items equals or exceeds 20%. Most of them, however, are relatively less important than many other items in the total sales of fresh produce throughout the year.[2]

Persimmons had a garbage loss of 37.1%. Blackberries, on the other hand, had a garbage loss of only

[2] Some commodities are relatively important during particular seasons of the year, but are less significant in the average weekly sales during the whole year, which accounts for the low average weekly amount handled for many commodities.

WASTE AND SPOILAGE LOSS OF FRESH FRUITS AND VEGETABLES, BY COMMODITY GROUPS, QUARTERLY, 1946*

AVERAGE WEEKLY LOSS OF FRUITS, PERISHABLE VEGETABLES, AND "HARDWARE" VEGETABLES, HANDLED IN BULK AND NONREFRIGERATED, BY TYPE OF LOSS, IN SELF-SERVICE FOOD STORES, NORTHERN NEW JERSEY



*4TH QUARTER INCLUDES DEC. 1945, OCT. AND NOV. 1946

ALL CHARTS COURTESY DEPARTMENT OF AGRICULTURE.

14.3%, but a mark-down loss of 20%. This mark-down loss was relatively high because the price frequently was reduced when deterioration first began to show in order to avoid a total loss. The situation for fresh strawberries was similar. Garbage loss was only 9.3%, but reductions in price accounted for 18.7%. Other significant differences may be observed by studying Fig. 1.

The annual average *dollar loss* by commodities is perhaps more significant to the retailer in his consideration of possible methods of reducing waste and spoilage costs than are his percentage losses. Bananas ranked first in value of average weekly losses—amounting to $7—although they ranked 40th in percentagewise losses. The bulk of the waste was garbage loss. However, the loss may not be typical for this commodity, since many of the bananas imported into this country during the last few years have been of low grade.

Oranges ranked second in value of loss, with a weekly average of $5.17, but ranked 60th in percentage losses. Florida oranges accounted for approximately 70% of the total value of oranges handled in the stores that were surveyed. The percentage loss on bagged Florida oranges amounted to only 2.4%, compared with the 3.8% rate for bulk oranges. The percentage loss on California bagged oranges was only 0.5%, but amounted to 5% for California bulk oranges. California bagged oranges were not bagged in California, but were shipped in the conventional method and bagged at the grocery warehouse. Concealed waste at the warehouse is not included.

Lettuce was the third in value of loss, with a weekly average of $4.84. However, it ranked 36th in percentage losses, with a rate of only 8.4%. Most of the loss in retailing lettuce came from price reductions; garbage losses were relatively less significant. Approximately 85% was western iceberg lettuce.

Tomatoes ranked fourth in value of loss, with a weekly average of $4.03, but ranked 54th in percentage loss with 5.1%. As would be expected, most of the loss was garbage loss. Approximately 87% of the tomatoes handled in the surveyed stores were pre-packaged. The average loss rate on repacked tomatoes was 4.8%, compared with 5.7% on the relatively small quantity of bulk tomatoes.

Apples were seventh in value of loss, but ranked 55th in percentage loss with only 4.7%. Cauliflower was the eighth commodity in value of loss and ranked 26th in percentage losses with a rate of 11.8%.

Seasonal losses

The seasonal variation in total average weekly loss rates of these retail food stores (see Fig. 2) does not appear to be so great as might be expected. The average weekly loss rate was definitely greater during the second quarter than during the other quarters. The average rate for the first quarter was relatively low, probably because cool weather helped minimize waste and spoilage. On the other hand, the relatively higher losses during the second quarter apparently can be attributed to the fact that fruits in the retail stores seem to break down more rapidly during these months—probably because many of them have been held in storage for a considerable time. Then, too, sizable quantities of highly perishable items such as blackberries and strawberries appear on the market this quarter.

Concealed losses on the whole averaged around 1% of the total retail value of the produce handled, although they were lower during October, November and December—probably because of the absence of stored produce on the market.

Garbage losses were low during the first quarter, as would be expected, chiefly because of favorable weather. They were relatively high during the second quarter for reasons mentioned above. They varied little during the third and fourth quarters.

Mark-down losses on the whole did not vary much during the different quarters although they were some-

what smaller during the spring and summer. This might be expected because more rapid deterioration during the warmer months would normally shorten the time in which produce could be moved at reduced prices before it became unsalable.

The average weekly loss rate on vegetables amounted to 8.5% compared with a 6.6% rate on fruits. The seasonal loss rate on fruits showed some variation. The rate was only 5.4% during the first quarter in contrast to the fairly high rate of 9% during the second quarter. The loss rates on fruit for both the third and fourth quarters, amounted to approximately 6.5%. The garbage loss on fruit was exceptionally low during the first quarter.

The average loss rate on perishable vegetables was relatively high throughout the year, but was somewhat lower during the winter quarter. The average loss rate on so-called "hardware" vegetable items (the less perishable vegetables) such as potatoes was fairly uniform throughout the year, although the third-quarter rate was somewhat below average.

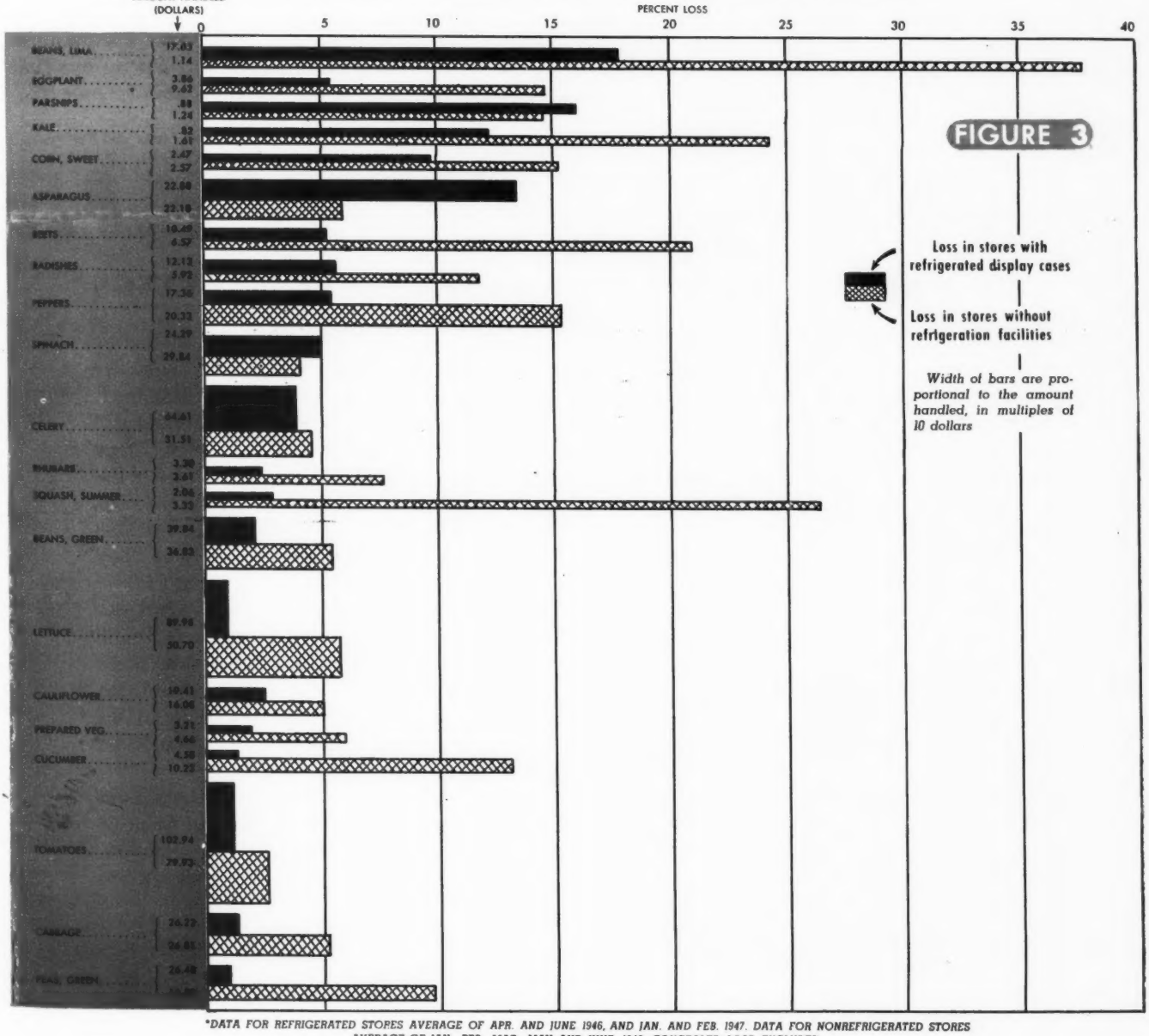
The fruit and perishable-vegetable groups accounted for approximately 43% of the total produce handled, with the hardware vegetable items accounting for most of the remaining 14%. During the fourth quarter, however, nearly half of the produce handled was fruits.

Value of refrigeration

Growers, shippers, transportation agencies and wholesalers are familiar with the necessity for refrigerating fresh fruits and vegetables to maintain freshness and quality. Pre-cooling before shipment, refrigera-

WASTE AND SPOILAGE LOSS OF REFRIGERATED AND NONREFRIGERATED FRESH PERISHABLE VEGETABLES, 1946-47*

AVERAGE WEEKLY LOSS (GARBAGE AND MARKDOWN ONLY), BY SPECIFIED COMMODITIES, IN SELF-SERVICE FOOD STORES, NORTHERN NEW JERSEY AND PHILADELPHIA, PENNSYLVANIA



*DATA FOR REFRIGERATED STORES AVERAGE OF APR. AND JUNE 1946, AND JAN. AND FEB. 1947. DATA FOR NONREFRIGERATED STORES AVERAGE OF JAN., FEB., MAR., MAY AND JUNE, 1946. CONCEALED LOSS EXCLUDED

tion in transit and cold-storage warehouses are extensively used in the distribution of fresh produce. Until recent years, however, little refrigeration was used in retail stores. Some retailers have cold-storage boxes in their stores and probably many more have the "produce barrel." But the majority have avoided the additional costs of refrigeration in hope that a rapid turnover would minimize waste and spoilage losses. Many retailers who lack special refrigeration facilities use their meat refrigerators for overnight and week-end storage of some perishable vegetables.

A relatively recent development in refrigeration for retail stores is the use of open-faced refrigerated cases. These cases are manufactured in 11-ft. sections. The number required per store depends upon the volume of fresh fruit and vegetable sales. Each unit has a well lighted canopy running the entire length, with a mirror backdrop to increase the illumination and the attractiveness of produce display. A temperature of about 40 deg. F. is usually desired for commodities for which the sales turnover is relatively rapid.

Although bulk produce is usually displayed in the cases, pre-packaged fresh fruits and vegetables also are frequently merchandised from them. The extent of the refrigeration provided by cases in which pre-packaged fresh fruits and vegetables were retailed was determined in a survey made by the Bureau of Plant Industry, Soils and Agricultural Engineering, U. S. Dept. of Agriculture, and reported in Dec., 1946.[3] This study showed the difficulty of obtaining desirable refrigeration at various points in the cases. This was due mainly to the fact that pre-packaged produce interfered with proper air circulation.

Observations were made in the Bureau of Agricultural Economics' survey to learn the extent of waste and spoilage losses of bulk produce in two stores in which these cases were used. The observations were made in one store for one week each in April and June, 1946, and in the other for two consecutive weeks the latter part of Jan. and early Feb., 1947. Although this is a small sample, it offers some basis for believing that refrigerated cases aid materially in reducing waste and spoilage losses.

Waste losses were significantly lower in refrigerated stores (see Fig. 3). The average waste and spoilage loss in the stores that were equipped with refrigerated cases amounted to 2.7%. This includes: concealed loss, 4%; mark-down loss, 8%; garbage loss, 1.5%. Data on which these figures are based were collected in the relatively cool months of Jan. and Feb., 1947, and in May and June, 1946. For comparable months the average waste (*Continued on page 200*)

[3] Bratley, C. O., "Refrigeration of Pre-packaged Fruits and Vegetables," *Refrigeration Engineering*, 52 (6), 516–520, Dec., 1946.

NEW UNIT CRACKERS FOR RESTAURANT SERVINGS

Maybe you have seen them in restaurants or hotels, served with soup—these new printed cellophane, heat-sealed packages containing four of Nabisco's Premium crackers.

This is said to be the first pack of its kind on the market. Crackers have usually been served loose in restaurants or they have been served in glassine or cellophane envelopes, but here is a new packaging idea that means a whole new promotion for crackers.

This new package, it is believed, will create new markets for Premium crackers, put the company's name right on the table before hundreds of diners and at the same time offer a fresher, crisper product to the consumer. For the restaurant operator, the package will provide a serving limited to exactly four crackers. It will provide a way to keep the crackers fresh until eaten, an important consideration in humid weather or when crackers must be stored under conditions where they are subject to moisture, cooking odors, etc.

The new packages also eliminate waste from breakage and loss from stale crackers. The cellophane-wrapped crackers cost slightly more than the bulk pack, yet when all the advantages are taken into account, the company estimates that there is actually little or no additional cost in serving Premium packages.

Success of the package is indicated by reports on test selling which have all been in favor of the packaged crackers. Freshness and convenience of the crackers in the package are definite added sales factors.

CREDIT: *Cellophane wrappers, Shellmar Products Corp., Mt. Vernon, Ohio.*

Label shows the five layers of vegetables separated by disks of vegetable parchment. Background is bright blue, trade name is white and bands are yellow. Illustration is in full color.

Actual contents shown without the can are used for dramatizing this specialty pack in company's national advertising campaign.

CANNED IN LAYERS

Five vegetables in one conventional can offered housewife by this original pack

Five years ago, the Larsen Food Co. of Green Bay, Wis., originated the packing of five layers of different vegetables in one can, each layer separated from the next by a disk of vegetable parchment.

At that time this specialty, known as "Layer-Pak," was placed on the market in experimental areas and gained immediate consumer approval. Women liked this can containing five different vegetables ready for garnish or for salads—and its economy since it eliminated the necessity of opening a separate can of each when only a small quantity was required.

This year the Layer-Pak is being introduced for the first time nationally, backed by a national advertising program.

Labels on the can tell the complete story of the vegetables in layers and illustrate in full color the five vegetables contained—peas, carrots, celery, lima beans and green beans. The color picture is an actual reproduction of the way the layers are placed in the cans. Reverse panels illustrate in color photography the garnish or salads that may be made with these five vegetables.

In the grocery store the two sides of the cans may be alternated so that the shopper may be attracted by the unusual variety of contents and by the pictorial menu suggestions on how to use this food specialty. This new idea in packaging is not only a time saver for the housewife, but an economical product for small families and apartment dwellers who want variety, but small quantities.

CREDIT: *Labels, U. S. Printing & Lithograph Co. Cincinnati. Parchment, Kalamazoo Vegetable Parchment Co., Kalamazoo, Mich. Cans, American Co., New York.*

For display, cans may be placed with either front or back of label showing. Back label illustrates uses for the vegetables both for salads and as garnish.

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MP MODERN

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BENEX
Brushless Shave
BENEX is a brushless shave cream recommended especially for
men with tough, wiry beards. Benex makes use of a modern principle for beard-soft
ening and conditioning . . . to give you quicker, smoother, more comfortable
PRICE 50c · BRISTOL-MYERS CO., NEW YORK
BENEX
Brushless Shave

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PACKAGING PAGEANT

1 The line of electrical indicating instruments made by Burlington Instrument Co. is now appearing as a well-unified family in new red, black and white redesigned packages. Label space on front panel aids in identifying stock on shelves and the use of interchangeable inserts enables three box sizes to package eight different sized instruments. Their one-piece construction offers greater protection in handling than formerly used two-piece containers, the company says. Carton, A. Geo. Schulz Co., Milwaukee.

2 This special bottle cap is also a measuring cap for foam bath and bath oils marketed by Fountainhead, Inc. Made of urea formaldehyde, the cap is shell pink in color. Display box is of transparent cellulose acetate. Caps molded by Shaw Insulator Co., Irvington, N. J., of American Cyanamid Co. Beetle.

3 In Los Angeles, L. R. Stone Co., Inc., is using a famous band leader's name to promote confections under the name, "Cugats Nugats." Xavier Cugat has designed the package with caricatures of himself as the design theme. The candy is packed in rows according to flavor and the flavor name is printed inside the box at top and bottom of each row. Box, Advance Paper Box Co., Los Angeles.

4 Peggy Sage puts lipstick and nail polish in a paperboard box that looks and opens like a miniature book for a fall promotion titled "The Mystery of the Beautiful Lady." Sides resemble gold leaves and the "book binding" is sapphire blue. When opened, one section reveals lipstick case in die-cut opening; other section has pull-out tray for the nail polish.

5 Seven Poly-Tex Gold Stripe plastic bags for refrigerator storage are being marketed as a set in this folding paperboard window carton with illustrations of product uses. Brightly designed in yellow and purple stripes, box enables display of product through die-cut opening. Design, Norbert F. Schwarz, Chicago. Carton, National Paper Box Mfg. Co., Inc., Chicago.

6 Wyeth, Inc., has introduced its Edryl nasal solution in a combination package containing a bottle of the liquid and a "Jetomizer" spray. Polystyrene bottle section of the spray is fitted with a four-piece applicator closure. The molded screw cap and pumping device combines the use of vinyl, acrylic and urea. Individual die-cut carton for spray fits into outer package. Atomizer molded by Calmar Co., Los Angeles, of Bakelite Corp. Vinylite, DuPont Lucite and Rohm & Haas Plexiglas. Polystyrene bottle, Plax Corp. and Owens-Illinois Glass Co. Urea caps, Owens-Illinois. Cartons, Boice Folding Box Co. Philadelphia. Glass bottle with phenolic cap, Owens-Illinios.

7 Bristol Myers' first new product since the war—Benex Brushless Shave—features a distinctive package of strong, clean, masculine design. Background color is beige, with trade name in red stencil type and other lettering in brown. Design, Georges Wilmet, New York. Collapsible tube, Sun Tube Corp., Hillside, N. J. Carton, The Lord Baltimore Press, Baltimore, Md.

8 Two-piece, metal-end fibre can serves as the container for Non-Drip coaster set comprised of four acetate coasters and 20 absorbent-paper liners. Can serves as a convenient home-storage device with coasters fitted into lower section and liners in top section. Fibre cans, Packard Container Corp., West New York, N. J. Labels, Troeger-Phillips, Inc., New York.

9 Trend toward can packaging of specialized products is exemplified by this cylindrical cone-shaped can with lever-operated cap for Italian Cook salad oil. Claimed as the advantages of metal packaging for such products are its compactness and insurance against breakage. Container, Crown Can Co., Philadelphia.

10 Novel gift packaging idea is this folding paperboard container for four miniature bottles of Leigh Perfume. Package opens into a pyramid resembling a festive Christmas tree. Names of the four scents appear below each of the bottles.

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MODERN PACKAGING

11 In introducing the new Chantilly lipstick, Houbigant wanted the case to be in keeping with the packaging for existing products in the Chantilly line. Clear and opaque acrylic molded in the shape of the toilet-water bottle was selected for the lipstick cover; swivel is of polished brass. Case is packed in a paperboard carton. Design, Norbert Jay, New York. Case, Broder Industries, Inc., New York. Acrylic, Du Pont Lucite. Carton, Morris L. Lewy & Co., New York.

12 Durkee's shredded coconut is appearing in a new four-color carton designed for greater eye appeal. Carton has identical design—illustration of the shredded product pouring from a coconut—on both front and back panels. Color reproductions of coconut pie and coconut cake, with recipes, feature side panels. Price circle appears on top. Carton, Wm. W. Fitzhugh, Inc., New York.

13 Similarity between new wrapper design for Soft-Weve (facial-type toilet tissue by Scott Paper Co.) and the company's Scotties facial tissue package affords opportunity for merchandising tie-in. New paper wrap uses pastel blue and pink in plaid design. End labels carry out design on face of wrap. Wrap and end labels, The Evangelical Press, Harrisburg, Pa.

14 After an absence during the war, Coty's "Chypre" perfume is reappearing in a newly designed crystal bottle with trade name molded on its face. Opaque stopper bears decorative monogram of word "Chypre" in gold script. Cylindrical box is green, shading into white, with same intricate monogram. Brilliant glossy surface of box is achieved by a drawn transparent acetate hood tailored over the paperboard.

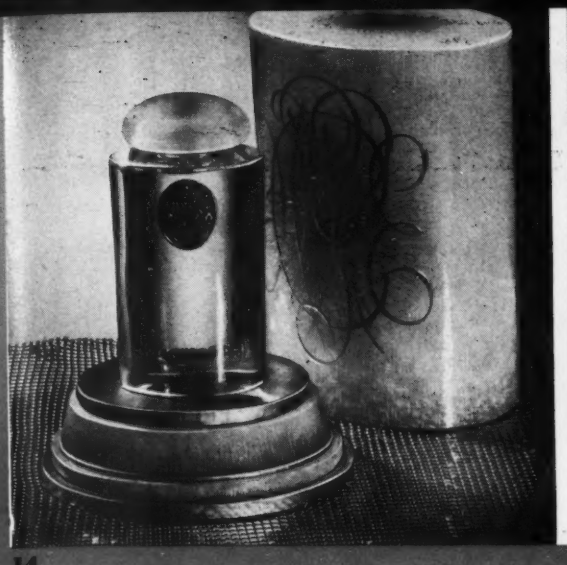
15 "Tay" detergent, made by Turco Products, has gone through two face-lifting jobs in its history. Current package (new in photo) aims to eliminate misconceptions created by former prominence of word "cleaner" and to associate more closely the words "Turco" and "Tay." Bright colors and terse copy give it vitality and simplicity. Design, Walter Landor & Associates, Los Angeles. Cartons, Hollywood Paper Box Co., Hollywood.

16 Grayed-down pastel green background with harmonizing dark green lettering give freshness and quality to these new No. 100 acetate folders for no-seam hosiery by Wm. G. Leininger Knitting Co. Colors are in reverse printed rotogravure, thus enhancing the sparkling surface of the acetate. Printed folder, Milprint, Inc., Milwaukee.

17 Never underestimate the promotional power of corrugated shipping cartons. New red and blue lettering on cartons for Little Bo-Peep ammonia, adopted by John Puhl Products Co., emphasizes brand and packer identity. Case doubles as display, with set-up instructions on top. Bottles and cartons, Owens-Illinois Glass Co., Toledo.

18 Folding paperboard carton for Countess Lydia Grey Doeskin facial tissues made by San-Nap-Pak Mfg. Co., Inc., has been completely redesigned. Point of interest on carton is drawing of graceful, beribboned doe which identifies product name with a trade symbol. Carton, New Haven Pulp & Board Co., New Haven, Conn. Design, Louis Koster, New York.

19 Although frozen foods are not as far along in Europe as in the United States, need for appetite appeal in designing frozen-food packages is recognized. Cartons for Switzerland's "Kristalfrost" brand are designed to illustrate in a right-hand panel the product within, as in this package for sweet black cherries. Slogan "delicious orchard fresh" predominates the left side of package face. Crystal design, together with product and trade name, feature side panel of package.



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PAGEANT

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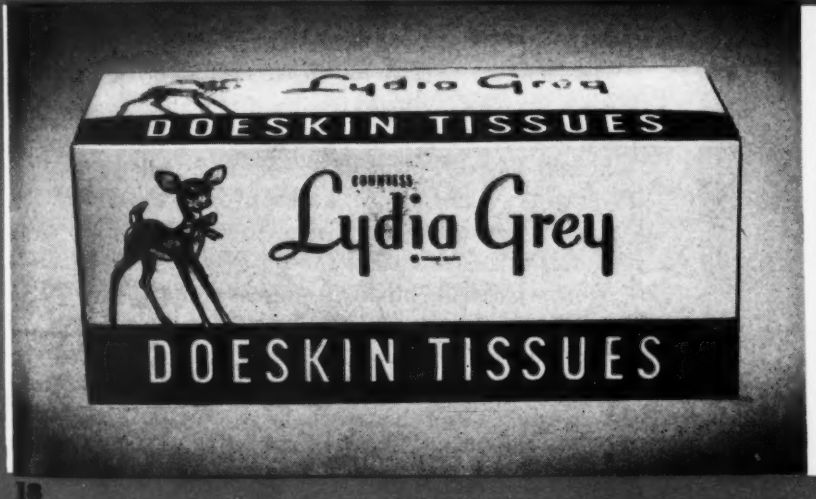

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CHECKERBOARD FAMILY

Outline symbols on labels show at a glance the different uses of these three fly sprays; outline of a house identifies spray for home use; sketch of farm buildings identifies spray for such buildings, while "Sanitation Sam" with his spray gun and hind quarter of cow leave no doubt as to proper use of third type.

Family design—the identification through the package of all members of a family of widely varied products—is becoming an increasingly important problem for package designers. With business firms all over the country expanding their lines into many fields which are different from, though related to, their original product, the trademarks and reputations of certain brand names are essential ingredients in merchandising the new lines. Yet many of these new lines require packages far different from those on which the trademark and brand name are familiar.

A case in point is that of the Ralston Purina Co., St. Louis, widely known as the manufacturer of Ralston cereals and Purina chows for livestock and poultry. Ralston Purina is a somewhat recent entry into the fields of farm sanitation products and farm supplies. The famous Checkerboard, one of rural America's best known trademarks, won its recognition as a Checkerboard feed bag and a Checkerboard cereal box. But sanitation products are liquids for the most part and farm supplies are metal.

From the standpoint of the packaging field, the sanitation product problem is of most interest. Here is a line of more than a dozen items, most of them in bottles, needing the identification of the well-accepted Checkerboard trademark. At the same time, the products, some of which are new to livestock and poultry producers, need plenty of explanation, directions and self-selling on the label.

The Checkerboard had been selected as Ralston Purina's trademark more than 50 years ago—back when Founder William H. Danforth was a youth in his father's general store in Charleston, Mo. One woman customer always outfitted her entire family with shirts, dresses, bonnets, etc., from the same bolt of checkerboard cloth. She found that it made it easy for her to spot the many members of her family in a crowd.

Mr. Danforth was so impressed with her logic that he selected the Checkerboard to identify the many members of his product family when he became engaged in the feed business and Purina Chows for livestock and poultry have been sold in Checkerboard bags for nearly 50 years. "Checkerboard" is now so well linked to the Ralston Purina name that the Post Office Department recognizes as the company's address simply "Checkerboard Square, St. Louis."

Some may call it good fortune that modern studies have discovered that the Checkerboard pattern is the best possible design to attract the eye But it was not just luck. It was the lady customer's observation, unscientific though it may have been, which established the Checkerboard as "the best possible design" to iden-

Purina incorporates some good ideas in strong related-line packaging and positive identity of products' uses

tify a family and it was Mr. Danforth's alert observation that grasped this idea for a trademark. Like so many scientific achievements, man learns how to use a thing before he learns why it works so well.

With the introduction of sanitation products into the Ralston Purina line in the late 1930's, it was natural that the Checkerboard pattern should become a basic ingredient in the package design. Taking the lead from the feed-bag design, the first sanitation labels were Checkerboard on all four of its edges with a panel of sell copy.

Further study of packaging in this new field brought about a change to a field of checkerboard across the bottom of all labels with product names in white against a field of orange, which is the type of label now being used by the company.

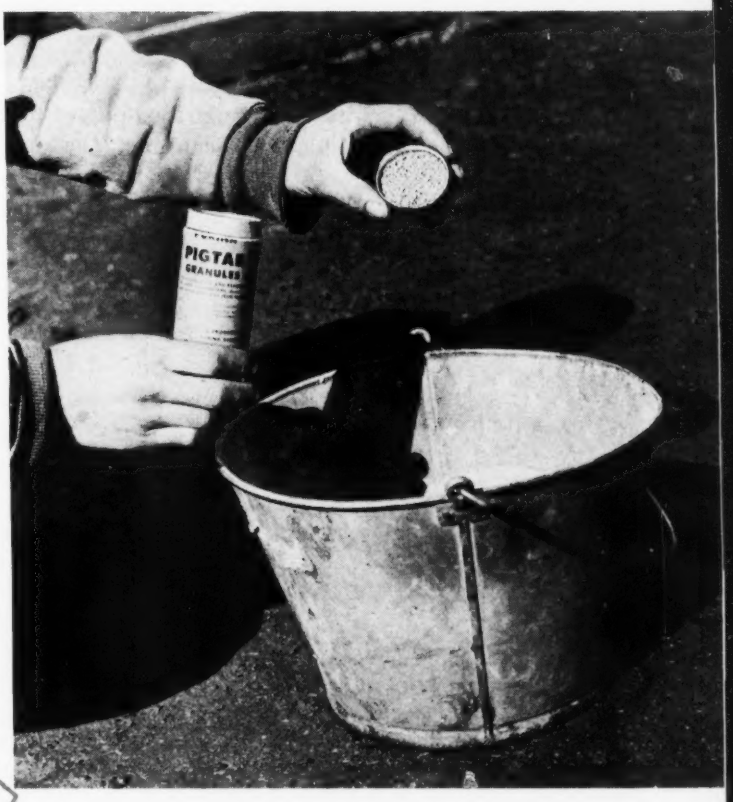
A Purina sanitation product label has to do all the common jobs of packaging, such as identify the product, describe and direct its use, help sell, etc., but it also has three important jobs which many other packages do not have:

1. It must associate the product with the reputation and quality of feed, which is an item related in so far as use is concerned, but quite unrelated in so far as appearance is concerned.
2. It must spotlight the differences between the products, some of which have similar purposes and are easily subject to confusion.
3. It must help in the use of the product by providing pre-measured doses or measuring devices.

The importance of these points can be understood best when one considers the Purina merchandising program in its over-all concept. Purina does not sell feed or sanitation products as such. These are sold as a part of a complete program for profitable livestock or poultry production. Yet the program must be tailored to the needs of the customer. These needs differ according to his location, climate, interests, acreage, equipment, scale of operation and other factors. That means that there must be several programs to suit the several kinds of customers. It also means there must be a variety of products to fit his needs—variety in size of package, scale of usage and others.

Purina's DDT Fly Sprays are a good example. There is a Purina Fly Spray for Farm Buildings and Stock Cattle (with DDT) in powder form, which is for the farmer with a large enough operation to justify the use of spraying equipment. Then, there is a Purina Dairy Spray (without DDT) in liquid form for use by the small operator or to supplement the DDT spray where close

Comparing old and new labels shows improvements made in strengthening product identification and emphasizing particular product name.



Packages aid in measuring doses. Label tells the user that the lid of this fibre can holds just the right dosage for two hogs and the whole package contains the right amount for 10 hogs.

neighbors have not used a DDT spray. Finally, there is a Purina Fly Spray for the Home which is a DDT spray in liquid form for small quantity sales and home uses.

One can easily understand the job which packaging has to do in differentiating between these three products and at the same time keeping them in the same product family—complementing each other instead of competing or fighting with each other.

Among the devices which have been used to accomplish these difficult packaging assignments are:

The Checkerboard, to identify the product with the Purina family of merchandise.

Sanitation Sam and other "use" symbols. Sam (who decorates these pages) is an outline character in white who serves as something of a secondary "sanitation trademark." Sam is usually shown using the product —scrubbing, spraying or whatever it may be—and by his different actions he clearly identifies the use of each particular product.

The name of the product, selected carefully for maximum understanding and identification. If the product has a single use, that use is made a part of the name. For example: "Purina Fly Spray for the Home," "Purina Weed Killer," "Purina Insect Killer." If the product has a double or multiple use, a coined name, usually emphasizing the Checkerboard trademark, is employed. For example: Purina Chek-R-Tabs for poultry drinking water tablets, Purina Chek-R-Fect for disinfecting a variety of premises and killing a variety of parasites, germs, etc., Purina Chek-R-Ton for worming and for a tonic.

The name is in white, giving a contrast to the orange field around it. In this way, the orange is employed to attract attention. Once attention is captured, the accepted principle that the eye moves in response to contrast is used to focus the customer's attention on the product name. To accomplish the third job specified above—that of pre-measuring—Purina has most of its products in packages sized according to their use. Purina Fly Spray for Farm Buildings and Stock Cattle, for example, is now offered in a $3^1/_3$-lb. size (among others) because this size makes it the right proportion to mix with four gallons of water. This simplifies the measuring job in using the product.

In the case of Purina Pigtab Granules (a hog wormer), the cap of the container has been designed to hold just the right amount for two hogs and the entire container holds just the right amount for 10 hogs. Many other similar devices are already used or are being studied.

The result of this "family packaging" program has been the evolution of an attractive Sanitation Products Department for Purina dealers with mass display possibilities.

Purina's growth in the farm sanitation business has been phenomenal, due to a combination of factors such as established distribution, careful product research and quality production. It entered a field already full of competition, but has achieved a position of leadership relatively quickly. One factor which has contributed to this success is Purina's recognition of the importance of packaging. That's why its packaging is all according to a program—all cut from the checkerboard bolt to identify the family.

CREDITS: *Bottles, Owens-Illinois Glass Co., Toledo; Anchor Hocking Glass Corp., Lancaster, Ohio; Fairmount Glass Works, Inc., Indianapolis. Bags, Thos. M. Royal & Co., Philadelphia; Benj. C. Betner Co., Devon, Pa.; Bemis Bro. Bag Co., St. Louis. Fibre cans, American Can Co., New York. Closures, Bernadin Bottle Cap Co., Inc., Evansville, Ind.*

These coined product names tie both Checkerboard family name and product use. Products are, left to right, a disinfectant, a tonic and drinking-water tablet.

Humidor bag

Protecting dehumidifying powder calls for special combination of aluminum foil, glassine and kraft in eye-appealing consumer pack

HEAT SEALED ORIGINALLY, BAG HAS TIN-TIE FOR EFFECTIVE RECLOSURE.

Another functional marriage of aluminum foil and paper is found in a package recently introduced by the G. N. Coughlan Co., West Orange, N. J.

The new container, currently packaging Coughlan's household dehumidifying agent, "De-Moist," consists of 0.0005-in. aluminum foil combined with glue adhesives to a 30-lb. glassine paper which, in turn, is bonded to a 50-lb. super-calendered bleached white kraft. The net result is an attractive, flexible, water-vaporproof receptacle which, according to Coughlan, meets every strength and sealing requirement of the powdered chemical.

Heat sealed at top and bottom, the rectangular bags are coated on the inside to a depth of $1^1/_2$ in. to insure a positive, heat-seal closure. The manufacturer has also equipped the bags with a metal tin-tie at the top for use as a reclosure. Contents are thereby protected for storage by the consumer over a long period.

An eye-catching three-color oil ink design has been used in printing. Vivid red and blue lettering appears on a bold yellow background. The attractive color scheme is believed certain to boost sales.

Functional efficiency of the new jacket, derived from its strength and sealing properties, is expected to minimize damage resulting from handling abuses. Since "De-Moist" must be delivered to the consumer in an absolutely dry condition, its jacket has been designed for maximum protection against absorption of moisture in transit or in storage.

The cotton inner bag containing the dehumidifying powder is closed by means of a draw string, then placed in the opened foil-laminated jacket. Bags are preformed on the filling line to minimize handling and speed assembly. When filled, the outer bag is closed by hand rolling three folds on the top and finally is secured by the metal tin-tie.

Distributed nationally in corrugated cartons of 12, the contents of this package, according to the manufacturer, are assured a freshness value comparable to what might be achieved with far costlier packaging structures.

CREDITS: *Bag, Benj. C. Betner Co., Devon, Pa. Aluminum foil, Aluminum Co. of America, Pittsburgh, Pa.*

Toy

New package is of two-piece folding-box construction. Surface design was improved by changing background color to red for greater attention value and including an illustration of a boy using the phone, along with suggested uses for the product.

One die-cut interior platform provides the rectangular places for securing the phones and wire and a riser piece for display. The dealer need only open box, place base in lid, lift riser piece, remove inner card and the box is then ready for display.

Component parts of the package: an interior die-cut piece which keeps phones from shifting and provides counter riser piece; extra guard piece which fits over phones that dealer removes; box top and base showing die-cutting of side panels which provide two short-skirted sides when box is closed, but a short front when unprinted base is placed in lid for display as illustrated above.

Salesman

New carton for play phones is designed for display and protection, and cuts packaging cost 15%

Toy packages require the best possible display value, economy and protection for shipment. All of these requirements were taken into consideration by the S. B. Mfg. Corp., New York, in developing a new package for its Master Phone sets.

These phones—a set of two battery-operated instruments that actually work when connected up in the home—were formerly packaged in a box that was not well adapted to display, since there was no identification on the base of the box when the cover was removed. Sometimes dealers placed the open base of the box on top of the lid to obtain the benefit of the display faces of the cover, but this took up double height on the counter which sales people did not like.

The phones also had a tendency to shift in shipment, since there was no way to secure them. Reels of connecting wires had to be placed in a separate tray and secured with small pieces of wire by hand—a costly operation.

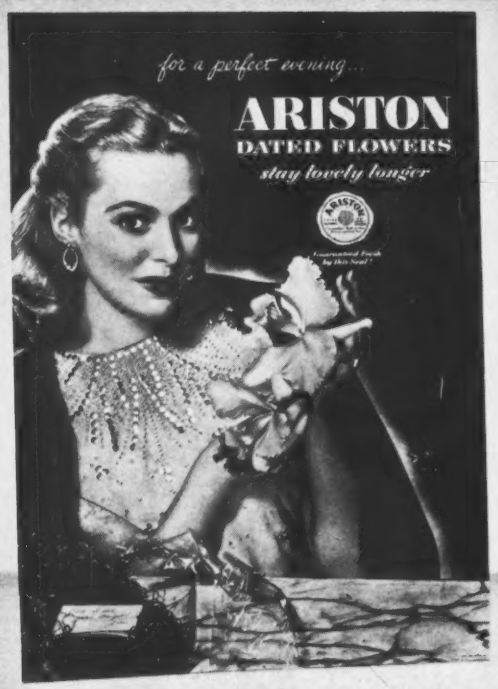
The new container is a two-piece folding carton with die-cut platforms. The base and lid of the carton each have one panel cut short so that when the carton is opened and the top fitted under the base it leaves the front panel partially open to show the merchandise. The interior platform has two rectangular openings, one at each end, to hold the phones securely in place. Between these openings are slots to hold the reels of wire so that the hand work of fastening them with wire is eliminated. This platform also has a riser piece which is bent up when the box is set on the counter and identifies the product and its uses. When the phones are in place in the platform, another piece of paperboard with smaller rectangular openings is fitted over the phones to give them further protection from shifting. This is printed with directions to the dealer to remove it when he opens the package for display.

Surface design of the package was modernized and the basic color changed to red for greater attention value. By the use of a second color, blue, for all other illustration and information the carton is an economical two-color printing job. An illustration of a boy using the phone gives human interest to the package and a similar illustration on the riser piece with a drawing of the connecting wire to a person on the receiving end of a call conveys quickly the idea of product usage.

The new package is reported to cost 15% less than the former one, eliminates shifting in shipment, saves a great deal of storage space and provides the display that is so important to the selling of merchandise on toy counters.

CREDITS: *Surface design, Alan Berni & Associates, New York. Carton, Blum Folding Paper Box Co., Inc., Brooklyn, New York.*

Former box was not well adapted to display since there was no identification when cover was removed. Phones had tendency to shift in shipment and reels of connecting wire had to be tied with separate pieces of wire by hand, a costly task.



With the increased use of packaging for fresh-cut flowers to retain their freshness, particularly the eye-appealing transparent plastic containers used for rare blooms, Ariston Dated Flowers are being promoted with these full-color display cards. Glamorous figures displaying perfect orchids, all in full color, appear against the midnight blue background. Display, U. S. Printing & Lithograph Co., Cincinnati.

Display

Sad Days are Glad Days with
MIDOL
RELIEVES
FUNCTIONAL PERIODIC PAIN
RELIEVES CRAMPS
EASES HEADACHE
CHASES "BLUES"
MIDOL
SUN MON TUE WED THU FRI SAT
1 2 3 4
5 6 7 8 9 10 11
12 13 14 15 16 17 18
19 20 21 22 23 24 25
26 27 28 29 30 31

Designed for use with displays of other items pertaining to feminine hygiene, this counter card for Midol tablets, product of Centaur Co. Div. of Sterling Drug, is printed in full color. Measuring $10^1/_2$ by $11^1/_2$ in., card illustrates a pretty girl and an enlarged reproduction of a Midol tablet. Display, Rex Window Advertising Co., New York.

Towle's Log Cabin syrup, product of General Foods Corp., is being promoted through this four-color display poster measuring 18 by 12 in. and featuring full-color reproductions of the bottled syrup and a tempting plate of pancakes. Theme, centered in large letters on the card, is that the product "is back!" in quantity with the decontrol of sugar. The legend "Real north woods maple flavor" appears in the lower left, while space is provided at lower right corner for price marking. Display, Wickersham Press, Inc., New York. Design, Kent Studios Service, Inc., New York.

This all-metal display and storage cabinet is designed with back opening and four shelves to hold all types of Johnson & Johnson Medicated Plaster cartons. Clean, medicinal effect is achieved through white background, red and blue lettering. Display, American Counter Display Co., New York.

Concave and conical in design, this three-dimensional counter piece promotes David Kahn Co.'s $1 Wearever ball-point pens. Die-cut openings in the central semi-circular pieces hold 12 pens, all pointing inward to the target. Display, Einson-Freeman Co., Inc., New York.

Gallery

A folding paperboard carton forms a combination point-of-sale display package for "Vodisan" and "Vodust," athlete's foot preparations now being introduced for general drug-store sale by the Vodine Co., Chicago. The display holds eight individual cartons and the die-cut cover folds back to form a stand for holding two—one of each of the products. Design, E. Reed Hemingway, Chicago. Carton supplier, T. Barry Hodge, Chicago.

A new toy, "Dizzy Discs," consisting of a wood platform and three highly magnetized plastic discs that float, jump, etc., is being marketed by Norton Trading Co. in a four-color folding paperboard display carton featuring three bald-headed cartoon characters watching the discs in action. Twelve sets, each small as a razor-blade package, fit into display. Design, Al Alko, New York. Printing, Chopp Printing Specialties, Inc., New York.

SERVICE PACKAGING

Behr-Manning's problem was not to pretty its products but to serve its dealers better; a 2½-year study led to complete repackaging

Roll-form abrasives have been standardized on 50-yd. rolls in smaller, easier-to-handle packages (left). Wraps, cartons and gummed tapes bear the combined Behr-Manning and Norton trademark; labels, by color and pattern, quickly distinguish various types of abrasive grits. The few products for consumers (right) have colorful, suggestive counter display cartons.

Ordinarily we think of repackaging as the process of making a retail package prettier or more inviting for over-the-counter sale to store customers. Not so with the unique and courageous repacking plan developed by Behr-Manning Corp., Troy, N. Y., for, over and above hardware and paint-store sales of the familiar sandpaper sheets to the householder, there is no substantial "over-the-counter" market for its 30,000 coated abrasives products. Aptly called "Service Packaging," this repackaging plan is designed for Behr-Manning's distributors, dealers and industrial or service-trade consumers.

Tremendous quantities of abrasive sheets, rolls, belts, bands, disks and innumerable special forms are used by industry and various service trades. The woodworking, metalworking, plastics, glass, shoe and leather industries are very large consumers and scarcely an industry exists which does not use substantial quantities in its maintenance operations. Automotive repair shops, body and fender shops, floor sanders, shoe-repair shops —all rely on coated abrasives for such operations as sanding, grinding, polishing, finishing and metal clean-up. Nearly all of these industrial and trade consumers are serviced through distributors or wholesalers in their various fields, such as industrial-supply distributors, hardware jobbers, automotive-maintenance jobbers, floor-sanding jobbers, shoe finders and others.

Behr-Manning's repackaging problem, thus, was not one of deciding on a prettier shelf package which might induce Mr. and Mrs. John Public to select their product over a competitor's. Their problem, rather, was what might be done in the repackaging of coated abrasives that would simplify the whole process of buying, selling, handling, shipping, inventorying and billing for these distributors, dealers and industrial or trade consumers—what would be of *service* to them? What time-honored, traditional practices of their industry could with courage be discarded in favor of eco-

nomical, functionally planned packaging practices?

After two and one-half years of research into the buying and selling habits of its customers, the resultant service-packaging plan is described by Behr-Manning as " . . . a planned, 'tailored' method of packaging coated abrasives in such proper quantities, weights and invoice values and in such readily identified containers or wrappers as to best serve the functional needs and habits of the distributor and his customer alike."

The project was set in motion by management and placed under the direction of a supervisor of packaging, under whom was gathered together a staff of factory, shipping, wrapping and packaging personnel. Thousands of invoices were studied according to product, trade class and end use. Distributor records were similarly checked. Jobbers and distributors were interviewed and the entire picture of "what happens after the product leaves the factory" was examined. Recommendations of trade associations were solicited, with the result that Service Packaging as evolved was truly a customer-built repackaging plan.

Deficiencies corrected

Much of the information brought to light indicated that the coated-abrasives industry had been wedded unnecessarily to traditions dating back 50 to 75 years. For example, standard sheets were packed in unhandy ream and quire quantities borrowed originally from the paper-makers' trade. Ordering, pricing, billing, inventorying and all such operations dealing with package quantities were complicated by the 24-sheet quire and the 480-sheet ream counts. Catalog prices based on ream quantities had to be broken down into 20ths of reams to arrive at quire prices. Service Packaging eliminates this confusion by inaugurating decimal-quantity packaging; henceforth these quantities will all be by the hundred, or part thereof.

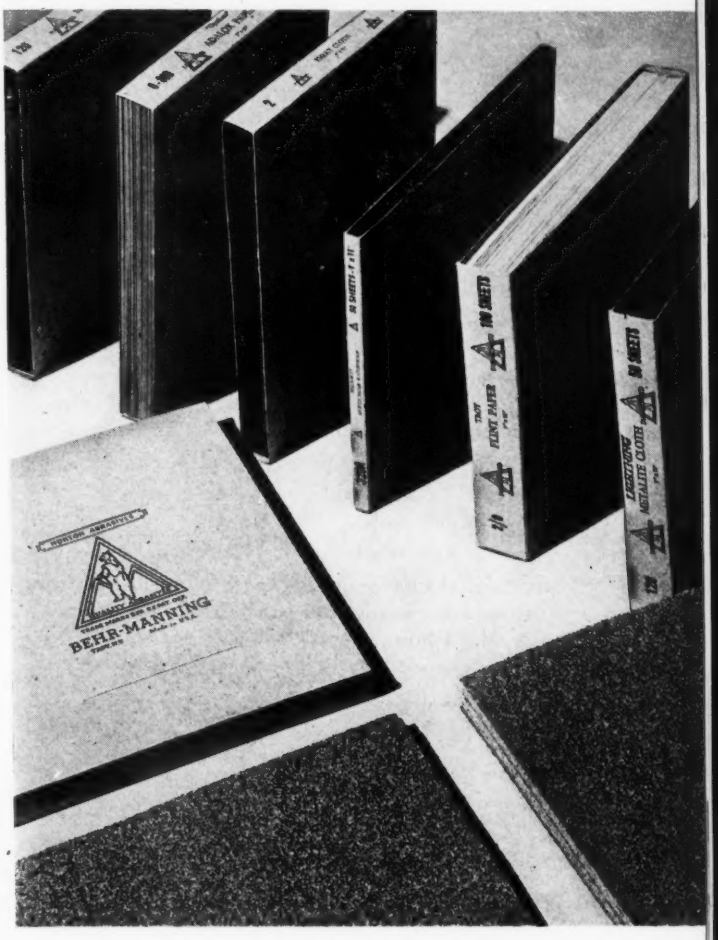
Another abuse discovered was in the packaging of the quire itself. Here it was the custom to wrap a paper band around each 24-sheet quire, or in some cases a thin paper over-all wrapping. Twenty such packages were then bound together to form the ream bundle, one to five reams, depending on bulk, the packages being baled between wooden-end boards and wirebound.

It was found that the paper-wrapped or banded quire packages broke open readily, spilling and mixing their contents and, worse yet, permitting the corners to curl and dog-ear, rendering many sheets unsalable under conditions of extreme dryness or humidity. The large, wirebound bales were in many cases much too heavy for handling without straining by shippers and warehouse personnel. Upon opening the bale packages, sometimes quires became broken and had to be recounted. To correct these conditions it was decided to adopt neat, sturdy chipboard sleeves in which could be packed 25, 50 or 100 sheets each, depending upon bulk. Ten such sleeves are packed in corrugated containers. In addition to correcting the curling, dog-earing and shuffling of sheet goods, the sleeves also permit another reform—end printing of product, grit number, size and quantity in identifying colors, readily legible when shelf stacked. This was a distinct improvement over face printing, which previously had been covered up when the quires were stacked.

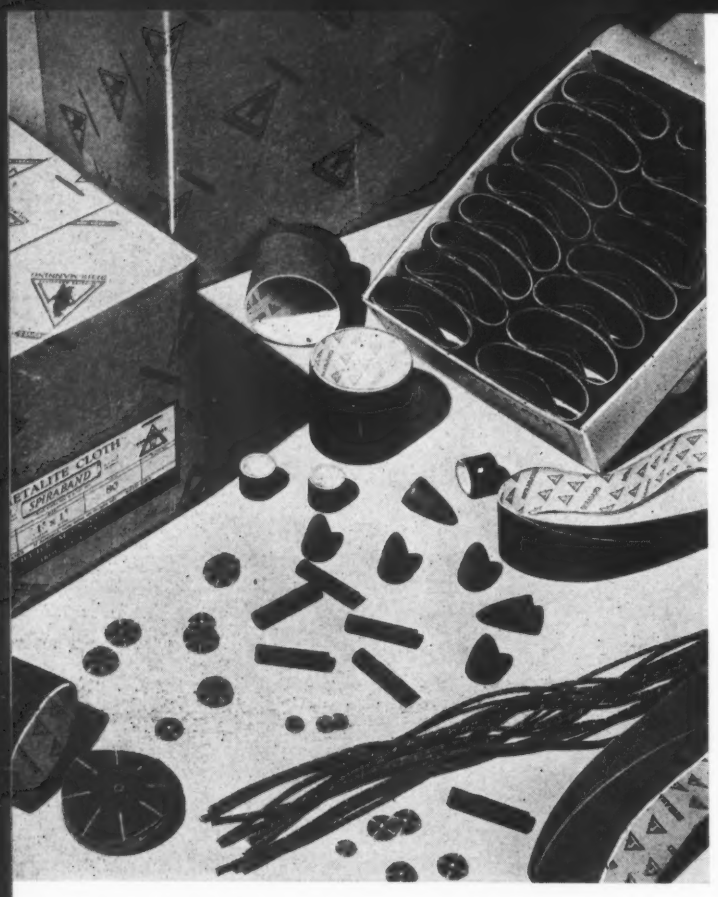
Color identification

Another extremely important advancement in the new packaging is foolproof product identification by color of label.

The industry distributor-trade associations have for years been campaigning among manufacturers and suppliers for better identification of shipping packages and of their component, inner packages after the



Problems of curling, dog-earing and broken packages in quire lots of standard abrasive sheets have been locked by adoption of simple chipboard sleeves for quantities of 25, 60 and 100 sheets in place of narrow paper band formerly used. Compare the two old packages, shown in center of photo below, with the new ones alongside them.



Specialties such as belts, points and disks are variously packaged, but all follow new principle of decimal quantities and standard labeling.

original package is broken open. Behr-Manning's Service Packaging utilizes seven basic label colors to identify its major product groups: green for Adalox; red for Garnet; blue for Durite; brown for Metalite; orange for Flint; black for Emery; violet with stripes for Speed-Grits.

Within these colors the type of adhesive is further distinguished by use of a solid tint block or all-over pattern which may be of triangles or diagonal stripes. For example, solid blue indicates glue-bond Durite products, blue with the triangular pattern indicates Speed-Wet Waterproof Durite products and violet in a striped pattern indicates Resinized Speed-Grits—a resin-bond product for floor sanding.

Thus each master package and each component resale package is marked with a characteristically colored and patterned label which stockroom personnel, order clerks and inventory clerks can recognize at a distance.

Quantity questions

Package quantities were next examined in the light of customer buying habits to arrive at the ideal quantity per standard or master package and the corresponding quantities per minimum or resale package as to weight, bulk, invoice value, etc. Here again the trade associations have been extremely active among manufacturers in a campaign to cut their costs for repackaging by providing sales-unit quantities and shipping containers which could be sold to retailers or consumers without the need for repackaging. With a few exceptions, standard-package quantities and minimum-package quantities have been either raised (*Continued on page 212*)

Standard shipping quantities broken down into minimum packages offer convenience for dealers. Thus, 200 Adalox sheets are packaged in a sleeve and 10 packs form the standard shipping quantity.

Group of roll products showing standard and minimum packages. Note diagonal pattern of violet-colored label that distinguishes Speed Grits; lightning trademarks for Durabonded products.

F. N. Burt Co., Inc.

500-540 SENECA STREET, BUFFALO, N. Y.

New York City · Philadelphia · Boston · St. Louis · Atlanta · Chicago
Cleveland · Cincinnati · Los Angeles · New Orleans · Memphis
Minneapolis · Kansas City · San Francisco, California · Newark, New Jersey

CANADIAN DIVISION:

Dominion Paper Box Company Ltd., 469-483 King St. W., Toronto 2, Canada

Save WITH MACHINE BUNDLING

Machine bundling is being used by more and more concerns because of the striking savings it makes over packing goods in costly made-to-order boxes.

The machine will bundle a dozen, or any desired number of cartons coming within its size range, and is adjustable for bundles of different sizes. It is suited not only to products in cartons, but also to products in tubes and bottles which are inserted in cartons. A "collector" can be supplied to assemble the packages in a variety of groupings – one, two or three layers.

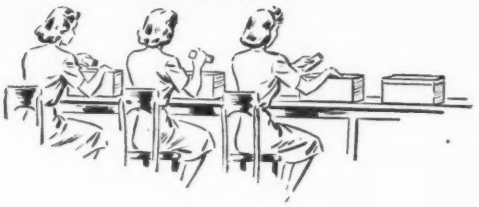
Using tough kraft paper, firmly sealed, the machine makes a bundle that is surprisingly strong. Printed end-labels are attached automatically.

Savings on packing material alone run as high as 60%, and the labor savings amount to thousands of dollars annually. Being lighter than cardboard, the bundle costs far less to ship. Less space is needed for storing rolls of paper than is required for bulky boxes. And since one machine will make 8 to 24 bundles per minute, depending on size, there is also a saving in factory space formerly required for hand packers.

Any way you look at it, machine bundling is a real money-saver. So why not investigate what it might mean to you? Our nearest office will be glad to furnish complete information.

PACKAGE MACHINERY COMPANY • Springfield 7, Massachusetts
NEW YORK CHICAGO CLEVELAND ATLANTA DENVER
LOS ANGELES SAN FRANCISCO TORONTO

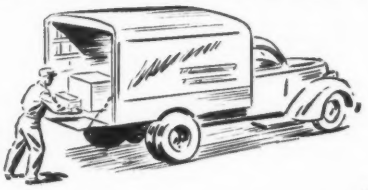
...ON LABOR

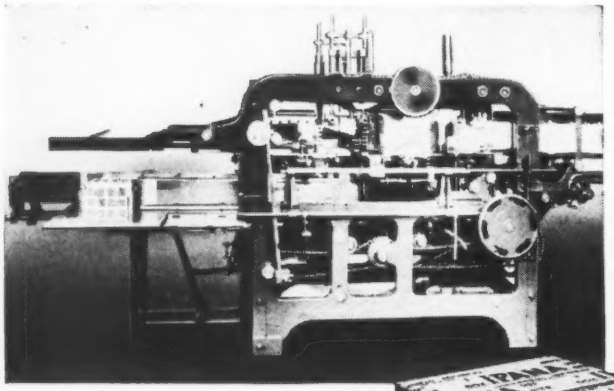


...MATERIALS

...STORAGE SPACE

...SHIPPING COSTS





MODEL F-10
BUNDLING MACHINE

PACKAGE MACHINERY COMPANY

Over a Quarter Billion Packages per day are wrapped on our Machines

PHOTO, GENERAL MILLS

Commercial polyamide resin is a very dense, tough substance. It requires the sharp blow of an ax, as illustrated, to break it up.

POLYAMIDES

Resins of the Norelac type for hot-melt and heat-seal coatings with unusual properties are in production now. A complete report on methods and characteristics.

by A. G. HOVEY*

Progress in modern packaging has paralleled two important technological developments. One is the invention of ingenious automatic machines for packaging and labeling and the other is the development of synthetic adhesive coatings. Progress in high-speed modern coatings may be said to coincide with the development of synthetic resins.

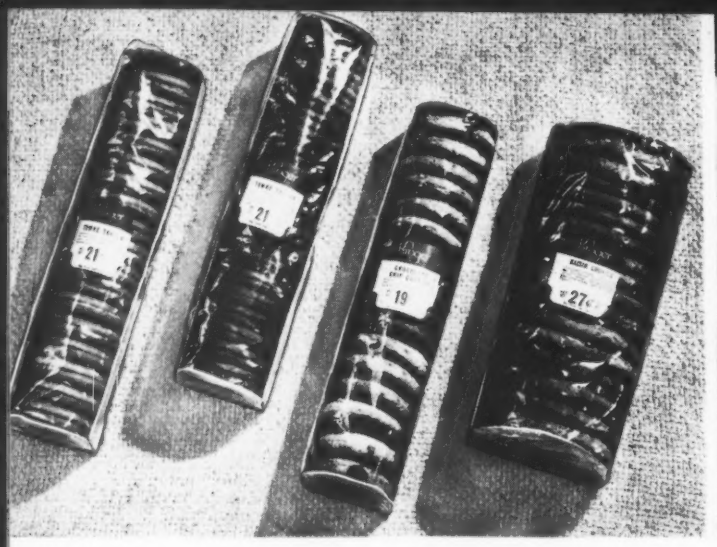
Among the most interesting of the new synthetic resins, so far as packaging is concerned, are the polyamides, commercially derived from soybeans. Developed by researchers at the Northern Regional Research Laboratory of the U. S. Dept. of Agriculture and announced in a technical report published in MODERN PACKAGING,[1] the polyamide resins were hailed as a new tool for the formulators of heat-seal coatings, having the important advantages of low sealing temperature, a very strong seal, freedom from blocking, nonflammability and excellent resistance to most of the agents that attack coatings.

Widespread interest in the polyamide resins (called Norelac by their discoverers) was shown immediately upon their first announcement, but at that time only a small pilot plant at General Mills was available for their production on an experimental basis. Wartime conditions and other difficulties delayed the construction and operation of full-scale facilities. But these facilities are now in operation at General Mills and to those who have been considering the special properties of polyamide resins for application to their packaging materials, it should be good news that the resins are now available in commercial quantities.

With the advancement of synthetic resin "know

[1] See "Norelac—a New Thermoplastic Polymer for Packaging," by J. C. Cowan, A. W. Schwab and L. B. Falkenburg, May, 1944, p. 113.

* In charge, Technical Sales Service, Chemical Div., General Mills, Inc., Minneapolis.



Expansion of cellophane wrapping increases use of heat-seal labels and films. Typical are these Kroger bakery wraps. PHOTO, THE KROGER CO.

Pre-packaged meat, also, requires positive adhesion of a heat-seal label for marking of price and weight. PHOTO, OLIVER MACHINERY CO.

TABLE 1—EFFECT OF PLASTICIZERS ON POLYAMIDE RESINS

Plasticizer	*Compatibility*			*Flexibility*		
	% Plasticizer used					
	10%	*15%*	*25%*	*10%*	*15%*	*25%*
Castor oil #3	C	C	C	Fl.	Fl.	Fl.
Castor oil #15	C	C	C	Fl.	Fl.	Fl.
Flexo 3GH	C	C	C	Fl.	Fl.	Fl.
Flexo DOP	C	C	C	Fl.	Fl.	Fl.
Flexo 8N8	C	C	C	Fl.	Fl.	Fl.
Plasticizer DP #520	C	C	C	Fl.	Fl.	Fl.
Abalyn A	C	C	C	Fl.	Fl.	Fl.
Hercolyn A	C	C	C	Fl.	Fl.	V. sl.
Petrex SS (soln.)	C	C	C	N	Fl.	Fl.
Ultraflex 857	I	I	I	..	..	..
Aroclor 1260	C	C	C	Fl.	Fl.	Fl.
Diethyl phthalate	C	C	C	Fl.	Fl.	Fl.
Dimethyl phthalate	C	C	C	N	N	N
Santicizer 8	C	C	C	Fl.	Fl.	Fl.
Santicizer 9	I	I	I	..	..	..
Santicizer 160	C	C	C	Fl.	Fl.	Fl.
Santicizer B16	C	C	C	Fl.	Fl.	Fl.
Tributyl phosphate	C	C	C	Fl.	Fl.	Fl.
Tricresyl phosphate	C	C	C	Fl.	Fl.	Fl.
Tri-ethyl phosphate	C	C	C	Fl.	Fl.	Fl.
Nevillac 10°	C	C	C	Fl.	Fl.	Fl.
Dibutyl phthalate	C	C	C	Fl.	Fl.	N
Dicapryl phthalate	C	C	C	Fl.	Fl.	Fl
Dibenzyl sebacate	C	C	C	Fl.	Fl	Fl.
Dibutyl sebacate	C	C	C	Fl.	Sl. fl.	N
Dioctyl sebacate	C	C	C	Fl.	Fl.	Fl.
Paraplex RG8 100% N. V.	C	I	I	Sl.	..	..
Paraplex G20 100% N. V.	I	I	I	..	..	..
Paraplex AL16	I	I	I	..	..	..
Paraplex AL111	I	I	I	..	..	..
Plasticizer #36	C	C	C	Fl.	N	N
Dutrex 20	C	C	C	Fl.	Fl.	Fl.
Dutrex 25	C	C	C	Fl.	Fl.	Fl.
Indonex VG	C	C	C	Fl.	Fl.	Fl.
Ethylene glycol	I	I	I	..	..	..
Glycerol	I	I	I	..	..	..
Triethanol amine	I	I	I	..	..	..
Mineral oils	I	I	I	..	..	..
Tall Oil	C	C	C	Sl.	Sl.	Sl.
Vegetable oils	I	I	I	..	..	..

Symbols of ratings:
C—Compatible
I—Incompatible
N—None or negative
Sl.—Slight
V.—Very
Fl.—Flexible

how," packaging engineers have brought forth two new useful lines of attack on assembly-line production. One of these is known as the hot-melt application and the second, which is even more versatile, is the principle of heat sealing.

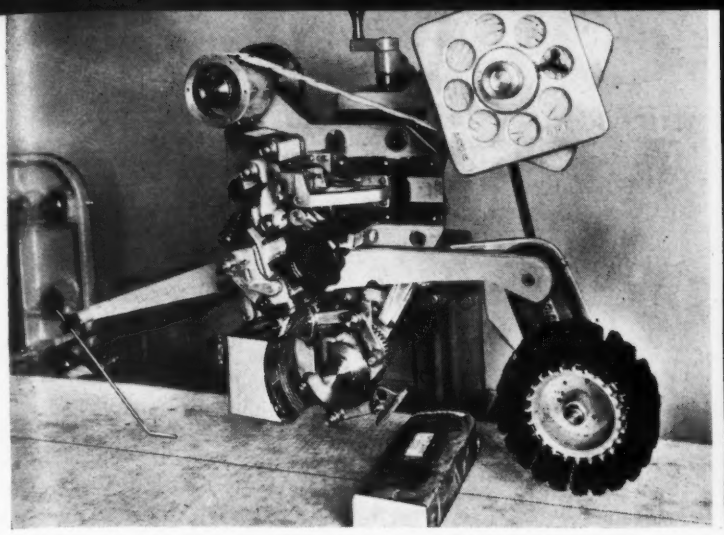
Before considering the formulation, application and special properties of polyamide heat-sealing coatings, it may be well to consider the very recent advances and extensions of heat sealing in packaging which lend special importance to the whole polyamide development.

The development of heat sealing

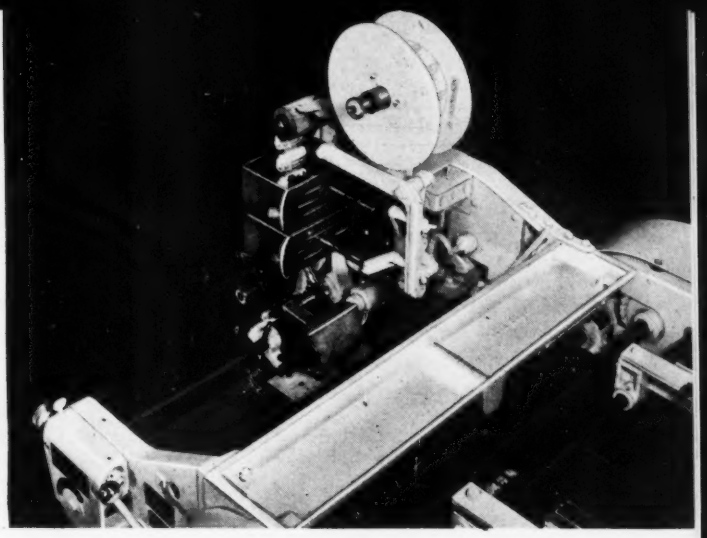
In a strict sense neither hot-melt nor heat-sealing operations are new; they were known for a long time before World War II. In fact one of the first heat-sealing compositions which may be remembered is the old dry adhesive-coated paper which was used to mount photographs without wrinkling. This dates back to Grandfather's day. Nevertheless the mounting of photographs by the flat iron and use of a double-faced coating of adhesive on glassine paper was more or less a novelty for a good many years. Apparently it was used only as a "dry mounting tissue" for photographs for fully two decades before the heat-seal principle began to look attractive to industrial users. Thus heat sealing is still comparatively new so far as industrial practice is concerned.

Heat sealing fortunately is one of those self-defining terms; it simply means what it says. It seals by heat instead of by the application of moisture or solvent. Heat sealing does not depend upon hot-melt application alone, although hot-melt application is often an excellent method for coating sheet material which is subsequently to be heat sealed. Sometimes the same heat-seal coating composition can be applied not only by hot melt, but from solution and even from emulsion. In all methods of application when the coating reaches a dry or non-tacky state, it may be heat sealed in much the same way and on the same schedule.

Recently, ingenious and spectacular heat-sealing machinery has come into existence. One type of unit is



This unit, attached to overwrap machine, applies heat-seal labels as cellophane-wrapped packages leave conveyor. PHOTO, PACKAGE MACHINERY CO.



Another unit for applying heat-seal labels from rolls, attached to automatic wrapper, imprints date and price. PHOTO, OLIVER MACHINERY CO.

being used for sealing labels on the ends of bread wrappers in bakeries all over the country. These end labels add considerably to the moisture-vapor-barrier properties of the entire package and certainly add much to the appearance, to say nothing about the added safety in guarding against the bread becoming unwrapped.

Labeling machines for bottled goods, which had already achieved outstanding mechanical success, have now undergone a great advancement in packaging perfection. A new, streamlined machine, no larger than an office desk, can dry label bottles at the unbelievable speed of 300 bottles per minute by means of the heat-seal principle.[2] The elimination of the glue pot and glue mechanism has permitted greater economy of space and time in the operation. Termination of worries about the glue box removes dozens of headaches to the person who is trying to label bottles on a large scale. No longer is it necessary to have someone come in and make up the glue early in the morning or to lose time during the day testing and maintaining glue or to worry about uniformity of the adhesive. No longer is it necessary to institute a clean-up before closing time. The machine keeps on neatly applying dry labels to the bottles until it is time to shut off for the night. The dry adhesive is pre-coated on the back of each label and is sealed automatically by thermostatically controlled heat of the proper intensity. The machine is readily adaptable to different shapes of bottles.

Another growing and already widespread use of heat seal is for the labels on cellophane wraps of cakes, cookies and other tempting products seen in our modern grocery stores.

The use of the heat-sealing principle is growing for sealing the end tabs of cartons, paper bags, cellophane bags, glassine bags, candy wrappers, colored foils and films for cheese, etc.

Heat sealing by electronic heating[3] is a comparatively new method. Electronic heating offers the advantage of directing the heat right where it is needed; that is, on the adhesive itself. Thus no great amount of heat is wasted heating up the paper, cellophane or other sheet material. This electronic-heat application, along with efficient heat-sealing material, avoids overheating of sensitive wrapping materials and thus eliminates decomposition. It is being predicted that the economy of such an operation will pay for the investment in a reasonable time, to say nothing of the added satisfaction and better efficiency as a result of better heat control.

Heat sealing with sturdy synthetic resin adhesive is the modern way to seal packages when it is necessary that the joints be resistant to moisture, mildew or other familiar forms of degradation which are common to the water-sensitive adhesives.

In laminating, as well as in the sealing of a great many packages, the lines between hot-melt application and heat sealing may be very indistinct. The two may be considered as practically combined into one operation.

All these are attractive end uses for which polyamide resin may serve better and more efficiently. The ingen-

Recent mechanical advances have intensified the need for heat-seal coatings with good handling characteristics. Here packaging experts examine new automatic "dry" labeler which heat seals labels on bottles 300 a minute. Glue pot is eliminated. PHOTO, NEW JERSEY MACHINE CORP.

[2] Machine manufactured by the New Jersey Machine Corp., Hoboken, N. J. See "Thermoplastic Labeler," MODERN PACKAGING, Sept., 1946, p. 128, and March, 1947, p. 175.

[3] See "Electronic Heat Sealer," MODERN PACKAGING, May, 1946, p. 120.

TABLE II—COMPATIBILITY OF RESINS WITH UNCOMPOUNDED POLYAMIDE RESIN

Resin	*Producer*	*Type*	*Proportions polyamide to other resin*	*Compatibility*	*Brittleness*	*General properly changes*
Rezyl 1102	American Cyanamid	Alkyd	all	I		
Cumar series	Barrett	Coumarone-indene	all	I		
Bakelite BR254	Bakelite	Oil sol. phenolic	all	C	N	
Bakelite 3360	Bakelite	Oil sol. phenolic	all	C	N	Toughens and polymerizes
Vinylite XYNC	Carbide	Polyvinyl butyral	90-10	V. sl.	N	Very small amounts toughen polyamide but limit of compatibility is only about 2%
			50-50	I	..	
			10-90	I	..	
Vinylite XYSG	Carbide	Polyvinyl butyral	90-10	V. sl.	N	
			50-50	I	..	
			10-90	I	..	
Pentalyn A	Hercules Powder Co.	Rosin ester	90-10	C	Sl.	Non-tacky; sl. lighter color
			50-50	C	Br.	Non-tacky; sl. lighter color
			10-90	C	V.	Sl. tacky; sl. lighter color
Vinsol resin	Hercules Powder Co.	.....	90-10	C	Br.	Dry
			50-50	C	Br.	Dry
			10-90	C	V. br.	Dry
Nevillac-hard & pale hard	The Neville Co.	Modified coumarone-indene	90-10	C	N	
			50-50	C	N	
			10-90	C	Br.	
Nevillac-soft	The Neville Co.	Modified coumarone-indene	90-10	C	Br.	
			50-50	C	N	V. soft
			10-90	C	N	Flexible
Nevillac 10°	The Neville Co.		90-10	C	N	Flexible
			50-50	C	N	Soft, flexible, very elastic
			10-90	C	N	Liquid
Nevillac RT	The Neville Co.	Phenol modified hydrocarbon	90-10	C	N	Flexible
			50-50	C	Br.	
			10-90	C	V.	
Nevillac OA	The Neville Co.	Phenol modified hydrocarbon	90-10	C	N	Flexible
			50-50	C	N	Soft
			10-90	C	N	Liquid
Amberol 800	Resinous Prod.	Rosin-maleic	all	C	Br.	Dry, non-tacky
Amberol K12A	Resinous Prod.	Modified phenolic	90-10	C	Br.	Dry, non-tacky
			50-50	C	Br.	Dry, non-tacky
			10-90	C	V.	Dry, non-tacky
Amberol 226	Resinous Prod.	Modified phenolic	90-10	C	Br.	Dry, non-tacky
			50-50	C	N	Sticky, slightly elastic
			10-90	C	Br.	Dry, non-tacky
Amberol ST137-X	Resinous Prod.	Pure phenolic	90-10	C	Br.	Dry, non-tacky
			50-50	C	Br.	Dry, non-tacky
			10-90	C	V.	Dry, non-tacky
Amberol F77	Resinous Prod.	Modified phenolic	90-10	C	Br.	Dry, non-tacky
			50-50	C	Br.	Dry, non-tacky; friable
			10-90	C	V.	Dry, non-tacky
Superbeckacite #1001	Reichhold Chemicals, Inc.	Pure phenolic (reactive)	all	C	Br.	Polymerizes; dry, non-tacky
Pentalyn H	Hercules Powder Co.	Rosin ester	90-10	C	Br.	Sl. tacky
			50-50	C	Br.	Tacky
			10-90	C	V. br.	Tacky
Nuroz	Newport Industries	Polymerized resin	all	C		
Zitro	Newport Industries	Zinc resinate	all	C		Tend to lose compatibility
Piccolastic resins C75, D75, E75, D100, C125 and E125	Penn. Industrial Coal Products Co.	Styrene	90-10	I		
			50-50	I		
			10-90	I		
Piccumaron	Penn. Industrial Coal Products Co.	Coumarone-indene	all	I		
Piccolyte S115	Penn. Industrial Coal Products Co.	Terpene	90-10	I		Incompatible for hot melt methods, but can be dispersed in solvents
			50-50	I		
			10-90	I		
Beckasol #24	Reichhold Chemicals, Inc.	Alkyd resin-plasticizer	all	I		
Beckasol #36 (100% N. V.)	Reichhold Chemicals, Inc.	Alkyd resin-plasticizer	all	I		
PS-60	Stanco	Hydrocarbon	all	I		

Symbols of ratings:
C—Compatible N—None or negative V.—Very
I—Incompatible Sl.—Slight Br.—Brittle

uity shown by the packaging engineers when combined with the successful application of heat-sealing compounds in the right spots has on many occasions saved considerable amounts of time, labor, money and headaches. In general, heat sealing adds to the attractiveness of a package or a label and, therefore, to the salability of the finished product. A neat label serves as a good salesman and also a good advertising agent.

Methods of coating application

In the application of heat-sealing coatings made of polyamide resins there are three possible methods of application.

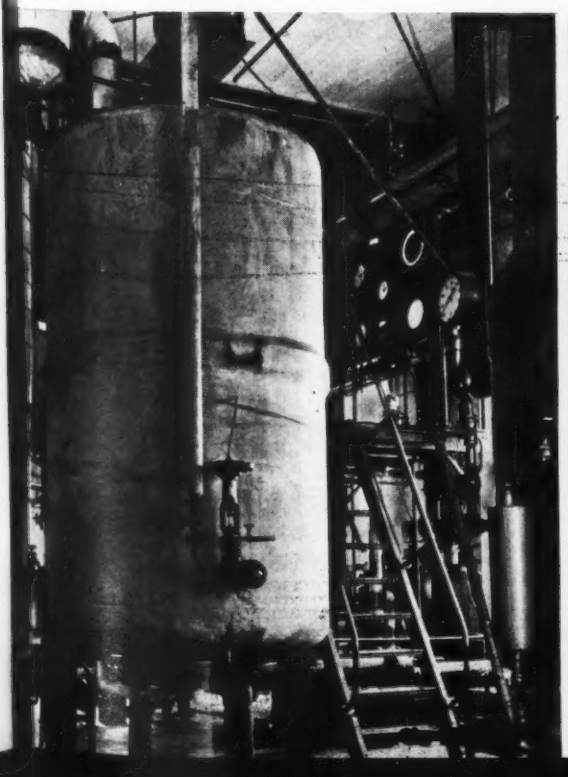
The commonest method is to apply the adhesive coating as a *solution*. A solution may readily be made by cold cutting the lump-formed resin with a mixture of equal parts of isopropyl alcohol and an aromatic solvent such as toluol. This is a very practical solvent combination, since it is more efficient than the isopropyl alcohol alone. Monohydric alcohols, longer than ethanol and shorter than lauryl alcohol, are the true single solvents; however, with polyamides, the use of aromatic hydrocarbons as a diluent has proved that the hydrocarbon in this case is an auxiliary solvent rather than a diluent, since the combination is better than either one alone. Polyamide resin-coating compositions handle very well on a standard paper-coating machine. Such coating machines are generally equipped with tunnel drying ovens and proper ventilation devices. The more modern ones have the vapors discharged into a solvent recovery unit as an added measure of economy, as well as efficiency and safety from explosion hazards. Polyamide resin in the average composition permits the release of solvent on a coating machine almost as fast as a lacquer and then the paper can be rolled up without danger of blocking or cold flow. The solubility of polyamide resins in various solvents is indicated in Table III.

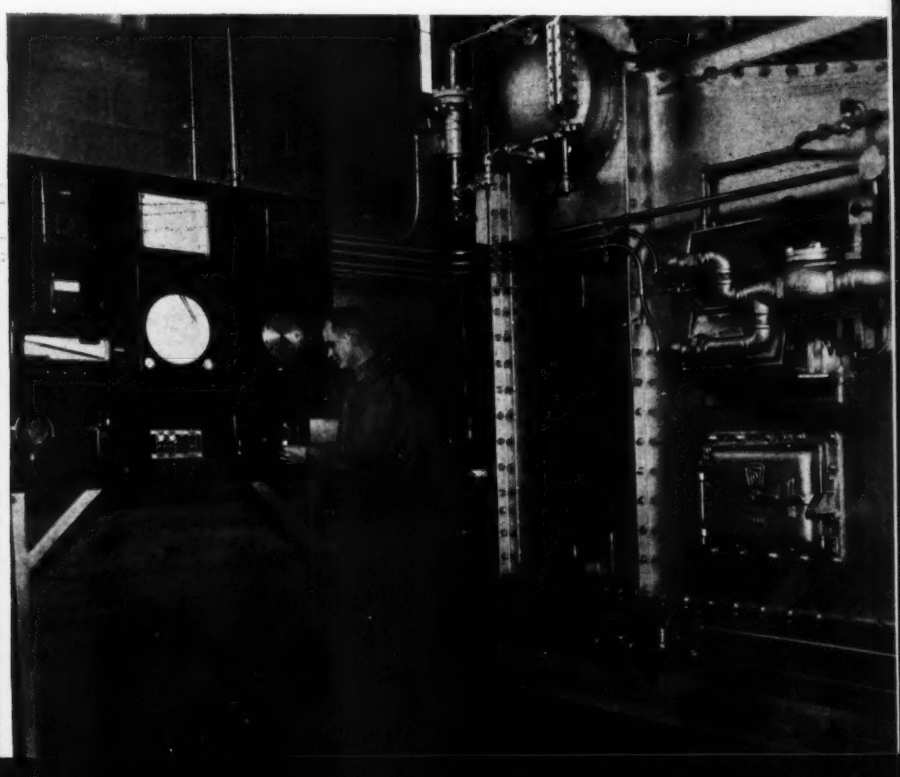
A second possible method of application is *emulsification*. It has not been particularly easy to emulsify polyamide resin, since the melting point of the resin is above the boiling point of water. Nevertheless, a new emulsion technique is being developed which, although not completely successful at the moment, gives indication of probable eventual success. There are three advantages in using polyamide resin in emulsion form. One is that the emulsion is well adapted to the old fashioned glue-spreading machinery which is not equipped to remove flammable solvent. An emulsion lends itself to much the same sort of handling as the customary water-soluble adhesive, but with the added advantage that the moment the emulsion breaks and the water is dried out, the coating composition is then a water-insoluble material. In this form it can be subsequently heat sealed and possesses practically all of the advantages of the same dry-base composition which might have been applied by some other method. The second advantage of using polyamide resin in emulsion form is that it does not contain any flammable solvent. The third and very important consideration is that emulsification often permits the incorporation of useful materials which are incompatible when their use is attempted in a hot-melt composition or in a solution blend. Results may thus be achieved by emulsion application that could not have been obtained in the molten state or in the presence of solvent.

Hot-melt application of heat-sealing adhesive coatings is rapidly coming to the fore on account of its high-speed potentialities. It also offers freedom from solvent hazards and freedom from worrying about emulsion

In making polyamide resin at General Mills, methyl esters of soybean oil fatty acids are dimerized in this bodying tank. Unpolymerizable monomer esters are removed.

Because of the high temperatures required in the manufacture of polyamide resin, Dowtherm vapor rather than steam is used as the heating medium. In the photograph below is shown the Foster-Wheeler Dowtherm vaporizer at General Mills which deliver 2,200,000 BTU's per hour.





breaking or the material going out of solution. It is also attractive because of the superior gloss of the resultant coating. It has been reported that hot-melt machines may be run up to speeds as high as 600 ft. per min., compared to top speeds of 240 ft. per min. for solvent application and probably even less for emulsion applications.

Composition of heat-seal coating

No matter which of the three methods of application is used for applying the coating to the sheet material, an average heat-sealing composition with polyamide resins falls, in general, into the range of the following compositions: 100 parts of General Mills' No. 93 and No. 94 polyamide resins, 5 to 15 parts of plasticizer, 5 to 15 parts of tackifying resins, such as some of the rosins and rosin esters, and 2 to 4 parts of 130 deg. F. paraffin wax. The use of some plasticizer is an advantage in that it helps to keep the resin more or less wet and flexible and aids adhesion. The use of too much plasticizer will cause blocking. In laminating it is permissible to use very much higher amounts of plasticizers. For low-temperature-resistant lamination it would be possible to use up to 30 or even 50 parts of castor oil as a plasticizer. In designing compositions to be used on a "delayed-action" type of heat seal, it appears that even larger amounts of plasticizer might be necessary than indicated above as general for coatings, though probably never as high as for laminating work. The effect of various plasticizers on polyamide resins is shown in Table I.

Only a very small amount of paraffin wax is compatible with polyamide resins without some third ingredient being necessary to make the wax more soluble in the resin. The very small amount of paraffin wax specified above accomplishes a dual function in that it enhances the water-vapor-barrier properties to a marked degree and at the same time is very useful in cutting down blocking tendencies. Both objectives are accomplished without any weakening of the heat seal. Larger amounts of wax tend to bleed to the surface and destroy much of the advantage of using resin instead of wax. When too much wax is used, a so-called "waxy" seal is obtained instead of the strong seal characteristic of resin compositions. The use of tackifying resins, such as the rosin esters, helps in fluxing and leveling and gives a certain quick tack or "grab." With polyamide-resin-coating compositions similar to that outlined above, it is possible to seal all sorts of sheet materials, including waxed paper, because (*Continued on page 196*)

Illustrated below is an aminolysis reactor. In this unit, the polymerized methyl esters are reacted with ethylene diamine to form the polyamide resin which is produced by General Mills.

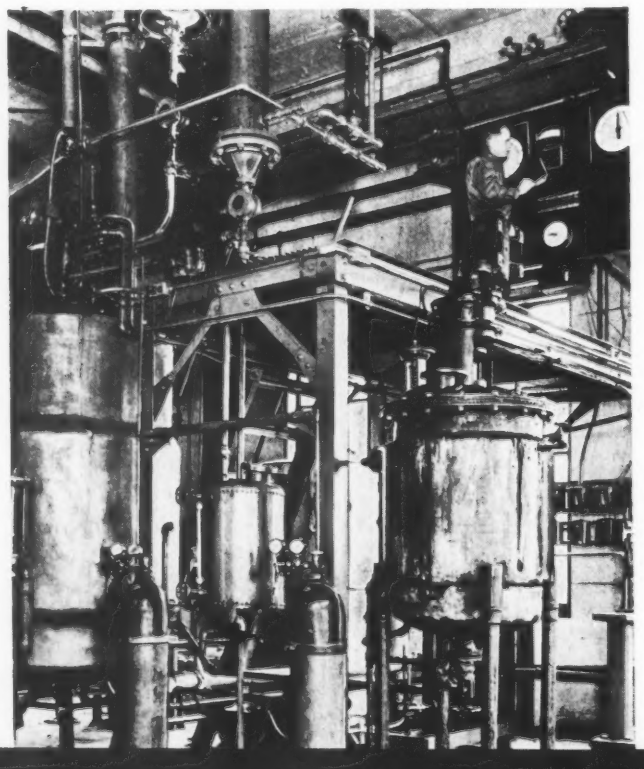
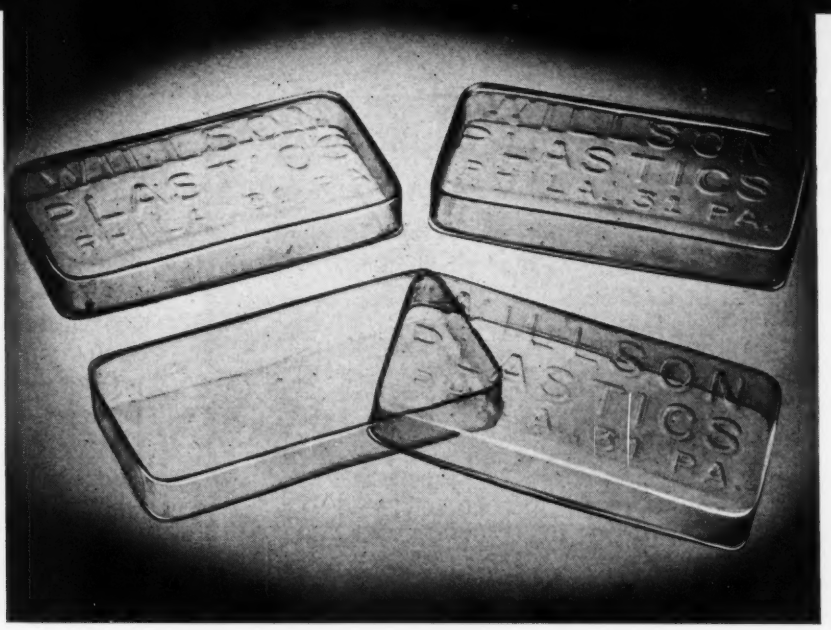


TABLE III—SOLUBILITY OF POLYAMIDE RESINS IN SOLVENTS

	Cold			*Hot*		
	Insoluble	*Slightly soluble*	*Soluble*	*Insoluble*	*Slightly soluble*	*Soluble*
Benzene	..	X	..	..	...	X
Toluene	..	X	..	..	...	X
Xylene	..	X	..	..	...	X
Turpentine	..	V. sl.	..	..	V. sl.	..
V. N. & P. naphtha	X	...	..	X	...	..
Mineral spirits	X	...	..	X	...	..
Cyclohexane	X	...	..	..	V. sl.	..
70% Toluene } 30% Isopropyl } alcohol	..	...	Slow	..	...	X
Methanol	X	...	..	Swells	...	..
Ethanol	X	...	..	Swells	...	..
Isopropyl alcohol	..	...	X	..	...	X
n-Butyl alcohol	..	...	X	..	...	X
Isobutyl alcohol	..	...	Slow	..	...	X
Methyl isobutyl carbinol	..	...	Slow	..	...	X
Cyclohexanol	..	X	..	..	...	X
Ethylene glycol	X	...	..	X	...	..
Glycerol	X	...	..	X	...	..
Methyl cellosolve	X	...	..	X	...	..
Cellosolve	..	X	..	..	...	X
Butyl cellosolve	..	X	..	..	...	X
Methyl carbitol	X	...	..	X	...	..
Carbitol	X	...	..	X	...	..
2 Nitro, 1 Butanol	..	...	X	..	...	X
1 Chloro, 1 Nitropropane	X	...	..	..	...	X
Nitrobenzene	..	V. sl.	..	..	...	X
Diethyl ether	X	...	..	X	...	..
Ethyl acetate	X	...	..	..	X	..
Butyl acetate	X	...	..	..	X	..
Amyl acetate	X	...	..	..	X	..
Methylene chloride	..	X	..	..	...	X
Ethylene chloride	..	X	..	..	X	..
Trichloroethylene	..	X	..	..	X	..
Beta,beta dichloroethyl ether	X	...	..	X	...	..
Chloroform	..	...	X	..	...	X
Carbon tetrachloride	X	...	..	..	X	..
Acetic acid	..	...	X	..	...	X
Acetone	X	...	..	X	...	..
Methyl ethyl ketone	X	...	..	X	...	..

1. Two drawn halves produce snug-fitting box of rigid, lightweight material with no cemented seams or corner holes.



2. Lettering or decoration can be embossed in forming process at no extra cost. Tooling expense is low. Imperfections in extruded material are exaggerated in photo; are not apparent when product is inside.

POLYSTYRENE BOXES

Drawing method using new oriented polystyrene sheet produces rigid transparent containers at very low cost

by T. CARROLL WILLSON, JR.,* and E. S. MARSH†

It has been one of the goals of the plastics industry to offer the packaging field a low-cost transparent container. As our economic picture is rapidly approaching the period where point-of-sale merchandising is becoming more important, the need for this type of package has become more pressing.

Attempting to fill this need, engineers of the Plastics Division of the Willson Magazine Camera Co. segregated the problem in two phases:

1. To find a material that possessed the necessary physical characteristics and appearance, coupled with the necessary factor of low cost.

2. To develop a low labor-cost production process that would further offset the relative price differential between plastics materials and cheaper materials currently used in box manufacture; i.e., paper, paperboard, etc.

In their quest for a solution to the first problem, Willson engineers found in their study of the various thermoplastics that extruded and oriented polystyrene sheet filled the bill. This material possesses desirable transparency, mechanical strength and—because the basic resin used in the manufacture is the cheapest of the commercially produced thermoplastics—it is of sufficiently low cost. The other advantages of this material as developed by Plax Corp., such as negative water-absorption quality, dimensional stability, mechanical strength, permeability, greater yield per pound and negative plasticizer migration (necessary in food packaging) are further discussed in a later section of this article.

Table I sets forth the comparative characteristics of oriented polystyrene and other transparent, extruded thermoplastic materials.

Production process

After deciding to exploit extruded polystyrene sheet for packaging, Willson engineers found it necessary to develop a unique production process for the successful low-cost production of drawn containers. Because of the unusual characteristics of extruded polystyrene sheet, none of the accepted processes used in the manufacture of boxes made of other thermoplastic materials could be utilized. A new automatic process was developed, with low-cost set-up and tooling as a prime requisite. It has been found that complete tooling

* Plastics Division, Willson Magazine Camera Co., Philadelphia.
† Plax Corp., Hartford, Conn.

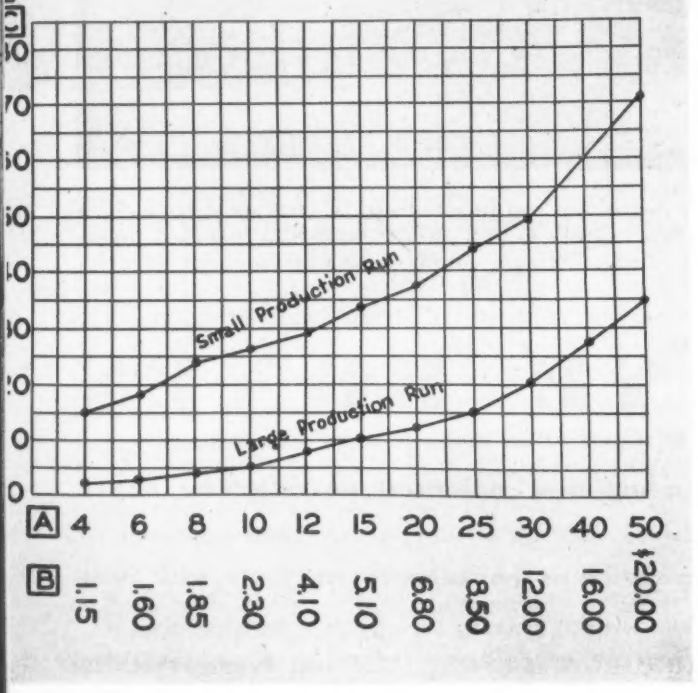
FIG. 3. COST-FINDING CHART

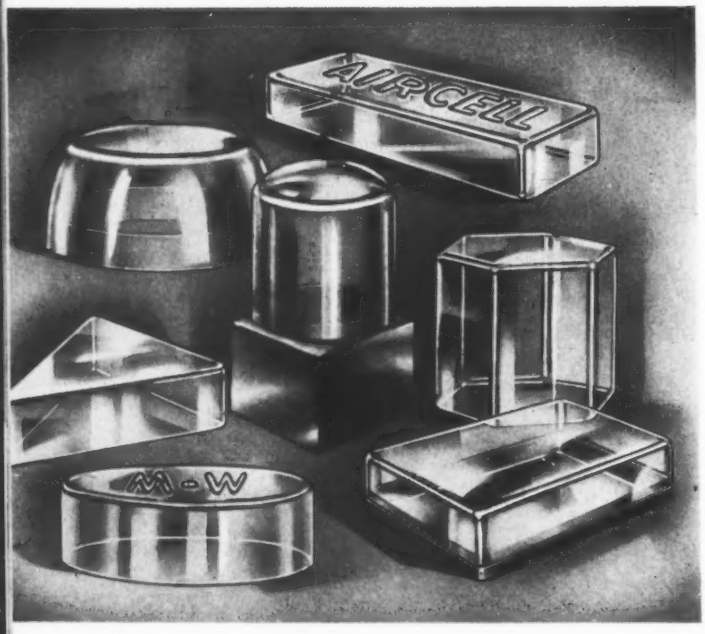
Step 1. Multiply length and width of container to find Factor 1.

Step 2. Find number on Line A that is closest to Factor 1 and approximate figure in dollars from Scale C by curve intersection.

Step 3. Take number in Line B below number used in Line A and multiply it by depth of container in inches.

Step 4. Add results of Steps 2 and 3. The answer is approximate cost per thousand. (To find total cost of two-part telescope box, multiply by 2.)





4. Suggesting wide variety of odd shapes that can be produced with polystyrene sheet by this extrusion process. Transparent top can be combined with paperboard base for lower-cost box.

and set-up cost may range as low as $75 to $500 according to size, quantity and type of container desired.

The resultant box shapes are one piece, having no folded corners or cemented joints. The surface-area size limitation can be as large as 1,000 sq. in. One drawn piece can be combined with another of slightly smaller dimensions, as shown in Figs. 1 and 2, to make a conventional telescope box. As shown in Fig. 4, unusual contours can be utilized to further the sales appeal of articles packaged within. Limits of drawn depth can be approximated on cylindrical shapes by using the factor of $1^1/_2$ times the diameter; depth limits on other contours can be extended as much as $1^1/_2$ times the width of the narrowest edge dimension. All corners of containers made by this process are radiused, giving further structural strength to the box. Some suggested contours are ovals, polygons, cylinders, cones, stars, pear shapes, etc.

In certain of the merchandising fields—such as candy, food, cosmetics, etc.—the combination of a transparent top with a paperboard base may be used to fit further within cost limitations.

Product adaptability

The new-type container appears to have obvious advantages in several fields.

Confectionery. By utilizing either a completely transparent package or a combination paperboard bottom with transparent lid, seasonal low-cost packages are now feasible, such as heart shapes, Christmas-tree shapes, turkey shapes, stars, pumpkins, etc.

Hosiery. Besides the obvious advantage of having merchandise packed in a transparent box, the use of such visual packaging would possibly negate the practice of packing hose in the cellophane envelopes that are now utilized within paperboard boxes.

Cosmetics. This industry has made probably the greatest strides in departure from prosaic packaging. This trend can be furthered, now that multi-contoured transparent packages are available at reasonable cost.

Food. Because of the non-toxic quality and the ab-

5. Simplified schematic sketch shows what happens when polystyrene sheet is oriented by two-way stretching. Lines indicate molecules. Orientation eliminates characteristic brittleness.

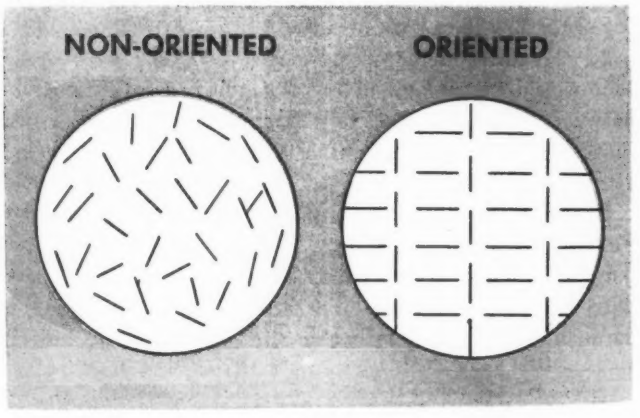


TABLE I—PROPERTIES OF EXTRUDED THERMOPLASTIC MATERIALS*

		Oriented polystyrene	*Cellulose acetate*	*Cellulose acetate butyrate*	*Ethyl cellulose*
Mechanical	Tensile strength (psi)	5,500–7,000	3,000–10,000	2,500–6,700	2,000–9,000
	Flexural strength (psi)	8,000–19,000	1,500–12,000	2,000–13,000	3,000–12,000
	Compressive strength (psi)	11,500–15,200	5,000–30,000	7,500–22,000	8,000–20,000
	Impact strength (Izod ft. lbs./in. notch)	0.26–0.6	0.7–6.0	0.8–7.9	2–5
	Rockwell hardness	M-80–M-95	M-25–M-80	M-25–M-69	M-25–M-65
	Elongation (%)	1.5–3.5	7–80	35–95	5–100
Thermal	Distortion temp. (° F.)	176–194	105–215	115–215	120–200
	Softening point (° F.)	220–240	145–260	140–250	200–260
	Specific heat (cal./gm./° C.)	0.32	0.3–0.4	0.3–0.4	0.25–0.40
	Linear thermal expansion/° C. × 10	6–8	8–16	11–16	10–14
	Thermal conductivity (cal./sec./sq. cm./° C./cm. × 10)	1.9	4.0–8.0	4.5–7.8	4.0–7.0
	Burning rate (in./min.)	Slow	Slow	Slow	Slow
Chemical	*Effect of:*				
	Weak acids	None	Slight	Slight	Slight
	Strong acids	Attacked by oxidizing acids	Decomposes	Decomposes	Decomposes
	Weak alkalis	None	Slight	Slight	None
	Strong alkalis	None	Decomposes	Decomposes	Slight
	Alcohols	None	Softens	Softens	Soluble
	Esters	Soluble	Dissolves	Dissolves	Soluble
	Aliphatic hydrocarbons	Considerable to none	Little effect	Little effect	Attacks
	Aromatic hydrocarbons	Soluble	Swells	Softens	Soluble
	Chlorinated hydrocarbons	Soluble	Swells	Attacks	Soluble
Physical	Specific gravity	1.05–1.07	1.27–1.37	1.10–1.24	1.07–1.18
	Specific volume (cu. in./lb.)	26.3–25.9	21.8–20.2	25.2–22.4	25.9–23.4
	Water absorption (24 hrs., %)	0.04–0.06	2.0–6.0	1.6–2.1	1.0–2.5
	Machinability	Fair–good	Good	Good	Good
	Effect of sunlight	Yellows slightly	Slight	Slight	Slight

* Table compiled by Plax Corp.

sence of any chemical plasticizer in polystyrene, it is a natural for the packaging of foods. Polystyrene also, because of its ability to withstand freezing temperatures, fits into the requirements of the frozen food industry.

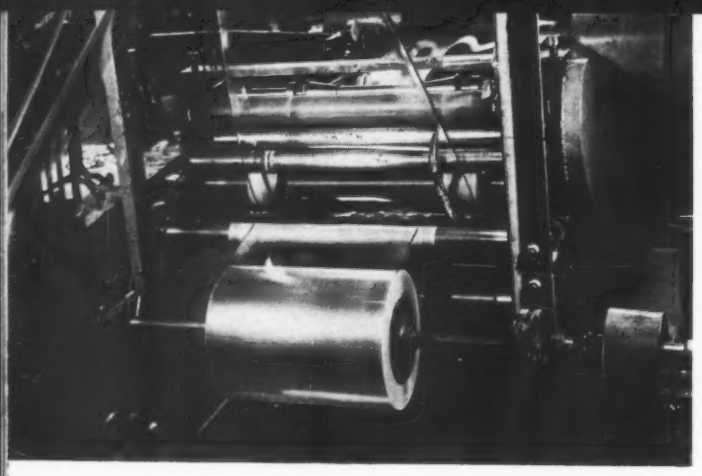
Dry goods. Because a radical departure from conventional packaging can be made which will further enhance the point-of-sale merchandising factor, such items as shirts, blouses, lingerie and linens and other dry goods should welcome these low-cost transparent boxes.

Cost figures

Fig. 3 shows a chart which may be used to approximate the cost of various sized polystyrene containers made by this process. The two curves on the chart represent the differential between low- and high-quantity production. No claim is made as to competition on price factor *alone* between extruded polystyrene boxes and cheapest paper boxes. However, the reader will note on the cost chart that in large quantities transparent boxes in certain sizes approach closely the cost of premium quality paperboard boxes. To help the potential user differentiate between what may be "low" and "high" production, the high production-cost curve has been based on a quantity factor of about 15,000,000 sq. in. This factor may be determined by multiplying the approximate area of box desired by potential quantity. The low production curve has been based on a quantity of 100,000 sq. in. Cost of other quantities will fall proportionately somewhere between these price curves.

An explanation of its use accompanies the cost-finding chart in Fig. 3. Suppose, for example, that you wish to estimate the cost of a telescope box, each half of which is 5 by 3 in. and $1^1/_2$ in. deep. Length (5) times width (3) equals 15, which is the first factor. Referring to the chart, we see that 15 intersects the "large production" curve at approximately $10 on the left-hand Scale C. Taking the factor in Line B below the factor 15 previously established and multiplying it by the depth of the box, we have 1.5 times $5.10, or $7.65. Adding the two monetary results, $10 plus $7.65, we have $17.65 which is the cost per thousand of each half of the box. The complete telescope box therefore would cost $35.30 per thousand in large runs, or about $3^1/_2$ cents per box.

To find the approximate cost of cylindrical containers, square the diameter and use this figure as the first



6. View of first experimental unit at Plax Corp. shows winding end of continuous extrusion machine producing oriented polystyrene sheet. Mechanical stretching unit is in housing to rear of winder. Larger machines are now in operation.

factor (instead of 15 as above). To find the approximate cost of odd-shaped boxes, find the outside dimensions of the rectangle or circle that will completely enclose the shape and proceed as above for either rectangular or cylindrical boxes.

Although the largest container indicated on this chart is 50 sq. in., containers up to 1,000 sq. in. in surface area can be manufactured at a proportionate cost.

Color and decoration

In addition to clear transparent boxes, there are possibilities for combinations, as extruded polystyrene is available in all color ranges. Other embellishments such as printing or trade name may be embossed in bold relief on top or bottom at no extra production cost. Embossing or debossing may be further colored by a roller process at slight increase in price. Contours of bottom may be used to nest such articles as smoking pipes, pens and pencils, etc.

Although extruded polystyrene is recommended as the ideal material at low cost, the process also can utilize other thermoplastic sheets such as cellulose acetate, ethyl cellulose and rigid vinyl chloride. Polystyrene sheet made by the extrusion process is not optically clear; close examination will show slight imperfections. These imperfections, however, do not mar the transparency and the unpolished material is considered adequate for packaging low-cost items. Where fine finish is essential the sheet can be burnished at extra cost.

Oriented polystyrene

Most packagers are familiar with the older types of transparent plastic sheeting used for drawn and set-up containers, but few have ever seen clear polystyrene sheet. To those who have had experience with polystyrene in other forms, it is known as a relatively rigid and brittle material. The question immediately arises, therefore, as to how this plastic can be used in thin sections in a drawing process. An explanation of the patented manufacturing process which mechanically orients the molecules in the sheet and overcomes this difficulty is in order.

Polystyrene is inherently a brittle material when compared with many of the thermoplastic materials, but the oriented polystyrene sheet is very flexible, remarkably tough and completely transparent. Polyflex[1] is the trade name for this material, first manufactured by Plax Corp. at Hartford, Conn., late in 1942. After long months of research, Plax engineers developed a method of mechanically stretching the polystyrene sheet following its extrusion by conventional means; this stretching radically alters the physical properties of the sheet without affecting the excellent chemical and electrical characteristics.

The extrusion process used, incidentally, is the low-cost process of continuous extrusion from a circular die, recently perfected, which produces a continuous sheet of any length in one continuous operation.[2] At Plax, the mechanical stretching for orientation has been made an integral part of the operation. (See Fig. 6.)

Polystyrene has a long chain molecule with rather poor bonding between side links; or in other words, the molecules may be separated by stresses at right angles to their length with comparative ease, but to break the molecules themselves requires great force. It was evident, therefore, that if proper manufacturing procedures could be carried out and the lengthwise directions of the molecule oriented in the direction in which stretch would be applied, much greater strength would be imparted to the resulting product.

In sheets manufactured by casting or extrusion processes conducted at high temperatures, the molecules will on the average occupy random position. Therefore, there are few molecules parallel to the surface of the sheet and such a sheet can be bent but slightly before cracking and ultimate breakage results. In the manufacture of Polyflex, the sheet is extruded and cooled to the temperature desired and then is stretched longitudinally and laterally at the optimum temperatures so that the molecules are aligned in two directions and the sheet is mechanically strong in both directions. (See diagram, Fig. 5.) For example, 0.010-in. rigid material will crack if bent around a mandrel less than $1/8$ in. in diameter, whereas the 0.010-in. Polyflex when folded flat on itself will only craze at the fold.

Now that the polystyrene has been made flexible, we find that the tensile strength has been increased by nearly 50%, impact strength more than doubled and elongation raised from 1.5 to 3%.

By no means other than mechanical stretching under accurately controlled conditions have these results been accomplished. The finished product as now produced is believed ideally suited for packaging applications.

Polystyrene itself is very economical, ranging from 88 cents per pound upward, depending on gauge and quantity; and as it is nearly (*Continued on page 212*)

[1] Trademark registered, U. S. Patent Office.
[2] See "Low-Cost Plastic Sheet by Extrusion," MODERN PACKAGING, May, 1946, p. 110.

Seamless body, low pressure container by Crown Can

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Adaptable to all known types of valves. Can be loaded by "pressure" or "static" methods at high rates of speed.

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Packaging hygroscopic tablets

QUESTION: Some time ago we manufactured a soft-drink tablet made of a combination of citric acid, bicarbonate of soda, sugar and fruit flavors. The tablets were 1 in. in diameter and 1/4-in. thick. Six were packaged in a lithographed box and wrapped in moistureproof cellophane. We ran into great difficulty with this packaging, as the tablet drew moisture to itself because of its ingredients and production had to be discontinued. Can you advise us on proper packaging for this product?

ANSWER: The composition of your drink tablet indicates that it is extremely hygroscopic and would rapidly deteriorate with addition of small amounts of moisture.

The combination of a powdered carbonate and acid becomes an unstable mixture as soon as small amounts of moisture have been absorbed. These two powders may be very hygroscopic themselves, but the addition of flavor materials and sugars increases the moisture demand of the mixture. Unfortunately, such a mixture will start to deteriorate spontaneously as soon as it begins to absorb moisture. The first increment of absorbed moisture causes the acid and carbonate to react. This reaction forms water, which accelerates the whole process and causes progressive caking and even liquefication of the product.

Several important factors must be understood and controlled to market successfully a product of this type. First, the ingredients must be so selected, tested and specified that they do not react without outside influences, in this case water vapor from the air. It may be necessary to use anhydrous grades of all ingredients and to develop special flavor mixtures. *If the formulation is not stable at normal temperatures in a hermetic container, it cannot be packaged successfully.*

During these tests the samples should be observed for signs of gas formation or pressure because one of the products of the reaction will be carbon dioxide. If this gas is evolved, it will be impossible to package the product in most flexible or unit-type packages. The second important factor is to package the properly formulated tablet to be practically 100% protected against moisture. The package must also have a positive reclosure unless each tablet is to be protected individually.

It is recommended that you use a screw-top metal can or glass jar with suitable cap liner and reclosure for the bulk packaging of these tablets. However, it would appear that the most convenient and best merchandising means would be to heat seal each tablet in a suitable barrier. One of the many heat-sealable and flexible aluminum-foil laminations would be ideal.

Changing to heat seals for coffee bags

QUESTION: We are manufacturers of glassine-lined bags for finely ground coffee. We want to improve our packaging by the use of a sealed closure. We would be willing to use either a pasted or heat-sealed closure, but would prefer the latter. Could present equipment be used? What sealing compound is best? Are there any patents to prevent us from making such bags?

ANSWER: The heat-seal closure has many advantages both to the producer and the user. It is siftproof, flavor- and moisture-tight, easy to open, uses no metal parts and can be made and sealed continuously and automatically at high speeds. A paste closure would not be as rapid, clean or efficient.

However, the application of an all-over heat-sealable coating—or of zones of limited area and registered position—cannot be effected without some addition or appreciable change in your present equipment. The extent of these changes or additions will depend upon the heat-sealing material, the kind of bag and many other factors. It will also be necessary to modify the closing means now employed by your customers; such modifications, however, are not usually too difficult or costly.

Two basic types of heat-sealing compounds may be used. Either one lends itself to either all-over coverage or limited and registered areas of application. One type is a heat-sealable lacquer which can be compounded from many kinds of resins and put into solution by many kinds of solvents. The other type is a hot-melt coating, which has a wide range of composition, melting point, heat-seal strength and other properties.

The final choice between these two types will depend upon many factors, but each will perform satisfactorily. You may obtain samples of various coatings on papers or glassines from lacquer or hot-melt makers or from suppliers of special-coated papers. From these samples you can decide upon the type of coating you prefer, equipment changes required and cost of finished bags.

There are patents covering various phases in the manufacture, closing and composition of heat-sealable bag closures. They should, of course, be checked.

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DAREX* AMR-10

interior collapsible tube coating

When Procter and Gamble were making specifications for the packaging of their sensational new tube-packed Prell Shampoo, they wanted the best in product protection. They wanted to avoid any possibility of contamination or deterioration of a superior product. They wanted an interior tube coating that would eliminate the danger of reaction of the product with the metal of the tube, that would be odorless, harmless and dependable. They specified DAREX AMR-10.

DAREX AMR-10 is a thermoplastic tube coating pioneered before the war, restricted by shortages during the war to uses only by government specification, and now back on the market for people who want such quality protection as that demanded for Prell. DAREX AMR-10 provides a tough, continuous film, for top-quality performance; it helps to insure that your product reaches the user as you made it, with the final degree of assurance in tube-packed protection. Why not try it, and see what a difference safety makes?

PACKAGING DIVISION

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P.S. Where a lesser degree of protection is required, you'll find DAREX AMR-12 is easy to apply.

*T. M. REG. U. S. PAT. OFF.

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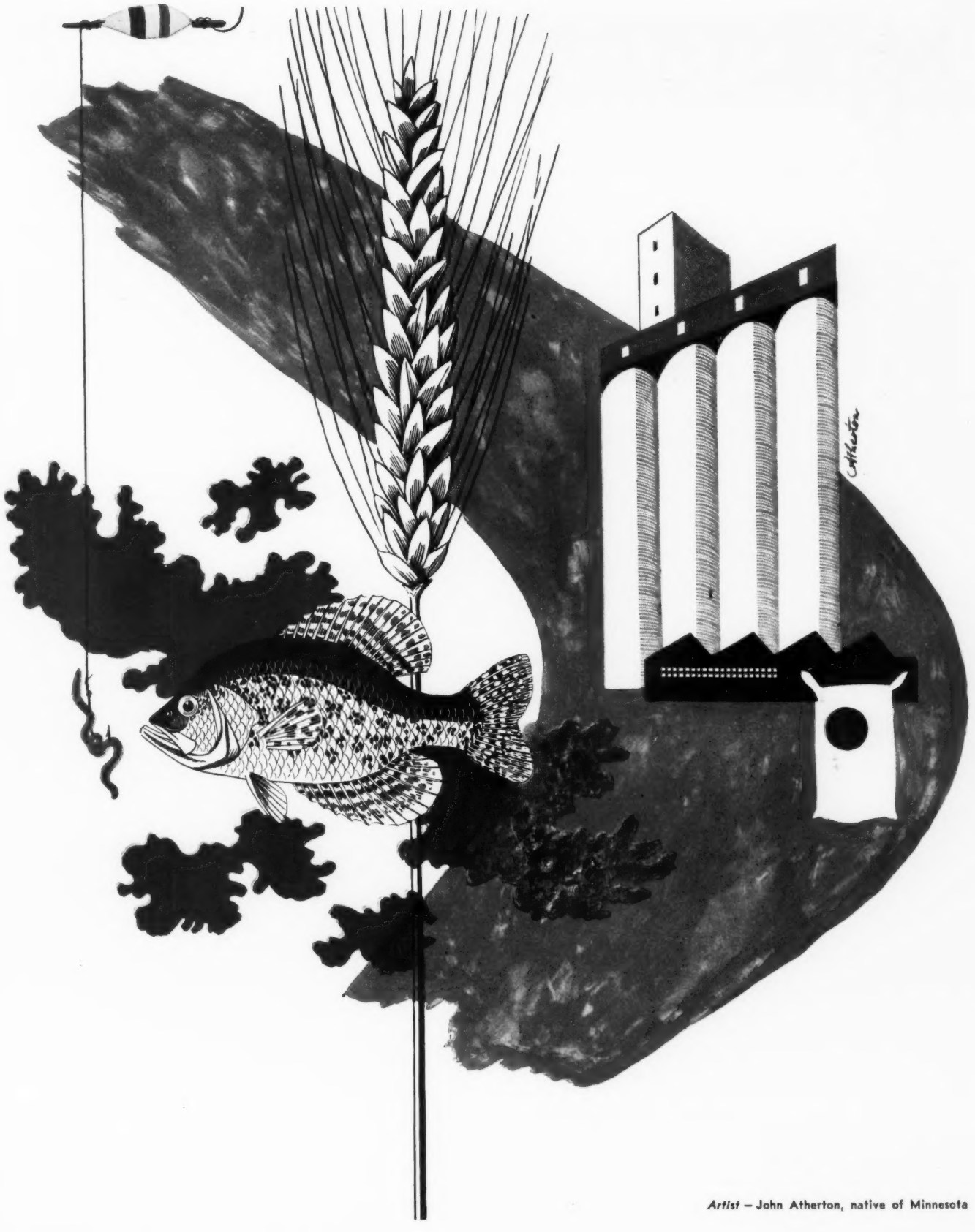


Artist – John Atherton, native of Minnesota

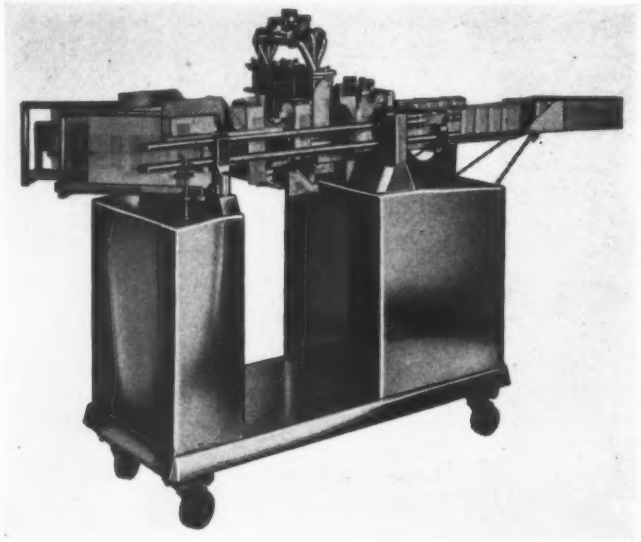
MINNESOTA—*annual purchases: $2¼ billion—mostly packaged.*

CONTAINER CORPORATION OF AMERICA

Equipment and Materials

SETS UP, FILLS AND CLOSES ICE CREAM CARTONS

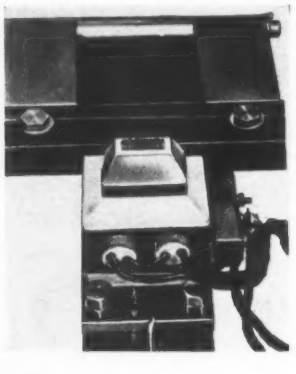
Anderson Bros. Mfg. Co., Rockford, Ill., announces the development of an automatic machine which sets up pint-size linerless ice-cream cartons, fills them direct from the freezer, with one, two or three flavors and tucks the carton top. The machine, the makers claim, will take the full capacity of three 150-gal. continuous freezers or a total of 450 gal. per hr. Operating with two production lines it can produce up



to 30 packages per minute, or a total of 3,600 pints per hr. The machine automatically synchronizes itself, it is stated, to the speed of the freezers; the flow from the freezer is never stopped when the machine is running. It is said to handle ice cream as stiff as it can be frozen on a continuous freezer equally as well as when it is relatively softer. The filled package is automatically advanced to a closing device and then to a bagging table equipped for putting eight pints or one gallon of ice cream in a bag.

LABEL CODING UNIT

Jas. H. Matthews & Co., Pittsburgh, Pa., announce the availability of a label coding unit for code marking on labels applied to round containers of either glass or metal. This unit imprints with heated type such vital information as date, batch, formula number, etc., in the form of letter, figures, symbols or all three. Standard unit holds up to eight pieces of $^3/_{32}$-in. or $^1/_8$-in. steel type, marking around the label. Thermostatically controlled heat allows for a 5 deg. F. variable in each direction. Adaptable to horizontal labelers, the marking type protrudes through a slot in the seaming pad of the machine and as the jars or cans roll over it they also pass over the type.

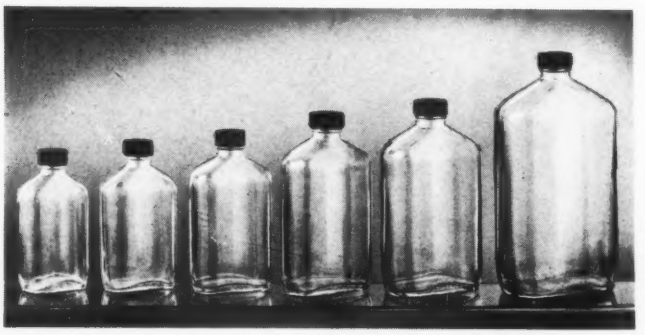


PRINTED CELLOPHANE BAGS STANDARDIZED

Following its announcement last month of a new line of standard plain cellophane bags at lower prices, The Dobeckmun Co., Cleveland, has extended its price-reduction program to cover printed bags in standard sizes. The new plan is applicable to single-wall, square bag constructions, surface printed in as many as three colors by the Lithopaque process, with the standard $^5/_8$-in. easy-opening lip. Where such bags can be used in any of the standard sizes and in large quantities, mass-production methods will make possible prices below the 1941 level, it is said, despite the great advances in labor and material costs which the converter has absorbed. Face and side-ply dimensions may range from 3 by $1^3/_4$ in. to 6 by 2 in. and length may be anything from 7 through 15 in., in $^1/_4$-in. steps. Dobeckmun will continue to supply custom sizes of bags and special constructions where required, but emphasizes the savings on standard printed and plain bags.

NEW LINE OF BOTTLES

"Shelfline," a new glass-container line for drug, cosmetic and household items, is being introduced by Owens-Illinois Glass Co., Toledo, to serve packers' needs where private molds are not feasible. Easy to hold, the funnel-shaped



shoulder of the new bottle permits easy flow of contents. Other features are its sturdy base and broad panels for effective label presentation and practical use in mass displays. Fourteen different capacities are offered, but only four cap sizes are necessary.

FIBERGLAS-REINFORCED WATERPROOF PAPER

Waterproof paper reinforced with Fiberglas yarns, produced by the Owens-Corning Fiberglas Corp., is now being offered commercially by Thilmany Pulp & Paper Co., Kaukauna, Wis.; Central Paper Co., Muskegon, Mich., and W. Ralston & Co., Inc., New York. The glass yarns are laid parallel to one another, or in a diamond pattern, between two sheets of kraft paper. Because glass does not absorb moisture, the Fiberglas yarns do not transmit moisture or vapor transversely between the two sheets of paper, it is said. The small diameter of the glass yarns permits a tight bond between the two sheets, enables use of a minimum amount of asphalt to secure a firm bond and a given vapor-barrier value and, it is reported, results in a smooth, flexible paper with high

ROSS CARTONING MACHINES are Death on Downtime

Ross cartoning machines can and do work 'round the clock—without the profit-eating penalty of excessive downtime while converting from one size cartoning operation to another.

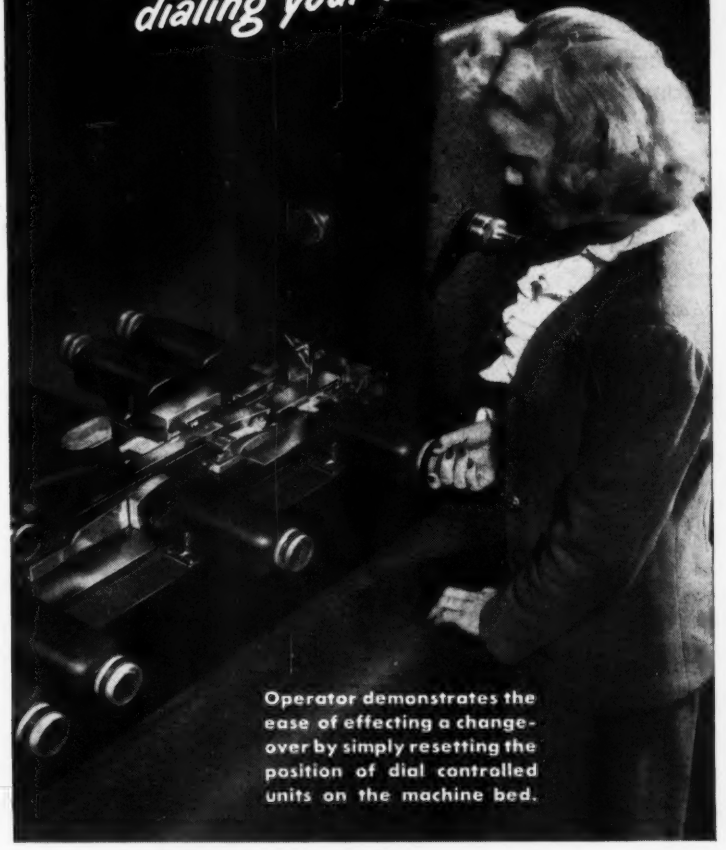
For in the Ross design there are no parts to remove and replace when making a changeover. It's done by adjusting movable units that are permanently built into the machine bed. Adjustments for carton size are made against numbered scales guided by calibration charts supplied with each machine. Any semi-skilled operator can make the changeover in a few minutes time. The convenience, simplicity and flexibility of the Ross dial control method means money to you. It is an exclusive, patented feature.

Now's the time to get acquainted with the Ross way . . . the new and better way to mechanically handle all cartoning operations. *Use the coupon.*

ROSS CARTONING MACHINE

Ross cartoning machines are made in both semi-automatic and fully automatic types.

Quickly adjust from one size carton to another... as easy as dialing your radio!



Operator demonstrates the ease of effecting a change-over by simply resetting the position of dial controlled units on the machine bed.

A. H. ROSS COMPANY, Inc.

PACKAGING MACHINERY

Subsidiary of Rockwell Manufacturing Company

P. O. Box 998 · Dayton 1, Ohio

Send this coupon today!

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Box 998, Dayton 1, Ohio

Gentlemen:

Please send me without obligation your catalog and complete engineering and performance data on Ross cartoning machines.

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YOUR NAME_____

PETERS!

A FAMOUS NAME IN PACKAGING MACHINERY

For fifty years PETERS MACHINERY COMPANY has brought the finest packaging machinery to its customers all over the world.

If you are still setting up and closing cartons by hand, it will pay you to investigate PETERS Carton Packaging Machines.

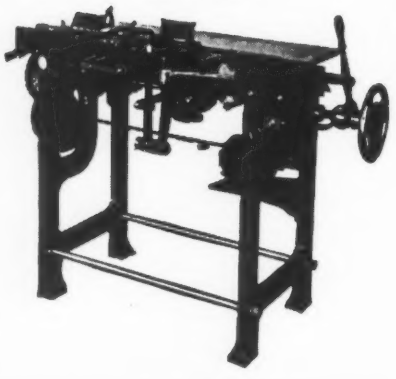
Carton users everywhere are finding that these machines are increasing their production, reducing labor costs and building greater profits.

Innumerable satisfied customers have made the name PETERS famous in the Carton Packaging field.

Send us samples of the cartons you are using. We will be pleased to make recommendations to meet your specific requirements.

This PETERS JUNIOR CARTON FORMING & LINING MACHINE sets up 35–40 cartons per minute, requiring only one operator. After the cartons are set up, they drop onto a conveyor where they are carried to be filled. Machine can be made adjustable to set up several carton sizes.

This PETERS JUNIOR CARTON FOLDING & CLOSING MACHINE closes 35–40 cartons per minute, requiring no operator. After cartons are filled, they enter machine on a conveyor and are automatically closed. Can also be made adjustable to close several carton sizes.



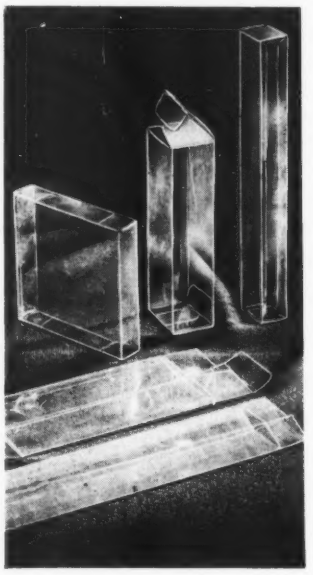
PETERS MACHINERY COMPANY
GENERAL OFFICE AND FACTORY
4700 RAVENSWOOD AVE., CHICAGO 40, ILL.

Equipment and Materials
(Continued)

tensile strength, tear resistance and puncture resistance. This paper is expected to prove useful for lining shipping cases and railroad cars, wrapping furniture, etc.

TRANSPARENT FOLDING CARTON

Troth-Bright-Page, Paoli, Pa., announce the availablity of the first completely transparent folding carton. Called "Plastafol," the carton is made from a sheet which is a lamination of two types of transparent plastic—one gives rigidity and the other is a tough material which provides the necessary folding endurance. Cut and scored similarly to conventional paperboard folding cartons, the package is handled in the same way. It folds flat for shipment and storage and may be set up and filled manually or by machine, with either tuck-in or glue flaps, as shown in the illustration. Mechanically produced on specially developed equipment, the box can be printed at low cost and the printing protected by placing it on the inside of one of the laminated surfaces.



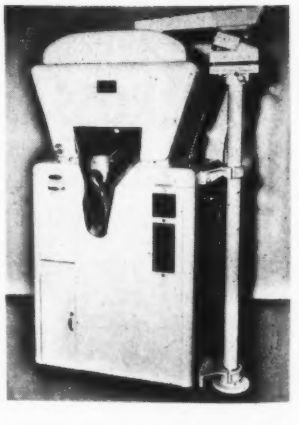
Various gauges of material can be used, depending upon the degree of rigidity required. The box will be particularly economical in large-volume runs for sizes up to 40 or 50 cu. in. and in some cases, according to the producers, it may compete in cost with the better types of paper boxes. Formerly operating as Troth & Bright, in Philadelphia, the plastics firm has reorganized and constructed a new plant in Paoli, Pa., for the production of this item.

PLASTIC WARE FOR PACKAGING

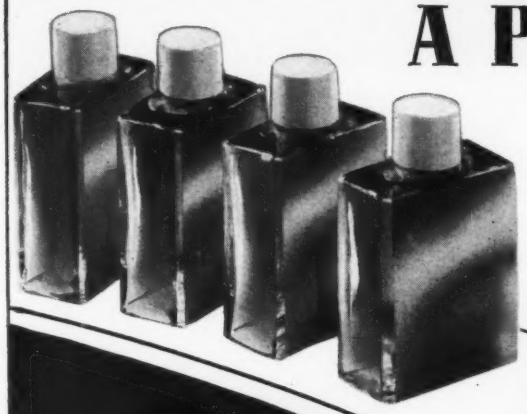
Irwin Corp., New York, is offering a line of plastic sectional dishes, salad bowls, baby cups and tumblers to packagers of foodstuffs, candies, nuts, etc. Such products may be custom packed in these containers and protected with cellophane wraps, it is suggested. Known as Irwin-Ware, these colorful plastic containers make excellent re-use items, it is said.

NET WEIGHING AND FILLING MACHINE

Wright's Automatic Machinery Co., Durham, N. C., a division of Sperry Corp., has announced an addition to its line of Hy-Tra-Lec automatic weighers, designated as Model C. This machine, for net weighing and filling of dry products, has a range from 2 to 16 oz., as compared to their Model A, now widely used, which has a range of $\frac{1}{2}$ to $2\frac{1}{2}$ oz. Utilizing the principles of positive displacement, this device has no ful-



A PACKAGING MIRACLE right on your *Assembly Line*



P.F. DECALS

Embossed PALM FECHTELER *ENGRADEL* DECALS add a glamorous sales personality to the simplest package . . . by transforming standard containers into "things of beauty" right on the assembly line of your plant.

Alcohol proof and scuff proof, PALM FECHTELER *ENGRADEL* DECALS do a distinguished identification job that can be matched by no other process for beauty and durability.

We'll be glad to send you samples and estimates. No obligation, of course.

PALM, FECHTELER & Co.
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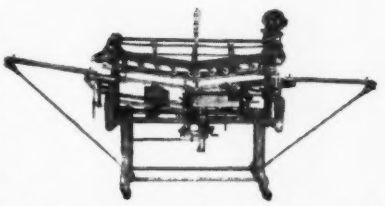
Since 1883

LABELS
BOXES
DISPLAYS

The Quality and Character of Howell Made Packages is Identified Instantly.

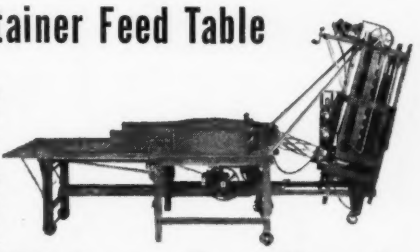
F. M. HOWELL & CO.
79-95 Pennsylvania Ave., Elmira, N. Y.

Quick Changeovers Solve Label Problems



For industrial use where product is packed in ¼-pint to gallon containers with or without bale ears or jug handles. CRCO-New Way Model PG Industrial Labeler can handle them all in ONE quick-change machine. The country's fastest, most efficient and versatile labeling machine. Send for details and prices.

New Way Container Feed Table



Handles metal or glass containers or long-neck bleach bottles. Containers are emptied on feed table and are automatically aligned in single file and carried on to the next operation—filling, labeling or casing. Illustration shows Feed Table with elevator accessory.

THE BEST OF Everything IN LABELING AND CASING EQUIPMENT

Chisholm-Ryder
COMPANY OF PENNSYLVANIA
HANOVER, PENNSYLVANIA

PERFECT REGISTER ...TREMENDOUS SPEED

THIS brand new No. A-4 aniline printing press offers perfect register at highest speeds on cellophanes, foils, and other materials your customers require for wrapping their products. Many other models in our complete line of presses are available for the aniline printer. Write us for complete detailed descriptions.

HUDSON-SHARP
MACHINE CO • GREEN BAY • WIS

Decorators on Glass and Plastic Containers Since 1936
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4 Colors in One Operation —Finest Detail

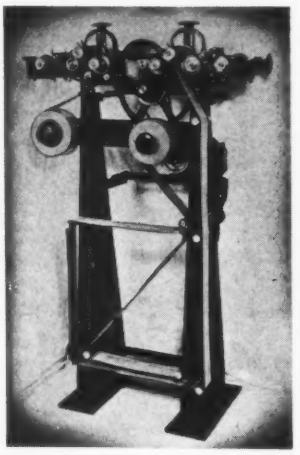
Anigraphic Process, Inc.
11 BROADWAY, NEW YORK 4, N. Y. • WHITEHALL 3-5253

Equipment and Materials
(Continued)

crum point, weight beams, dash pots, levers, linkages or springs. Principal units include a vibrator feed, feed control, drive assembly, weighing device, bucket-traversing mechanism, discharge chute and spout. The cabinet is aluminum with ivory-enameled surface. Handling of the container may be automatic or manual, depending upon the product and container. The amount of a product that can be weighed in one charge is limited by the volume of the bucket, its working volume being 350 cu. in.

NARROW WEB ROLL PRINTER

A two-color narrow web roll printer, which will print candy-bar wrappers as well as narrow webbing such as gummed and pressure-sensitive tapes and narrow woven fabrics, is being offered by Frostad Engineering Co., Milwaukee, Wis. This 6-in.-wide printer, mounted on a floor stand, is manufactured for standard printers' oil inks, quick-drying aniline and rotogravure inks, or a combination of any two. A single frame with side loading and unique alignment, having impression adjustments from the side, is simple to set up, adjust and operate, it is said. The high floor-stands with idler rollers allow 10 ft. or more of drying time for ink and make possible the inclusion of a laminating unit, perforator unit, numbering device, slitting unit, etc.



SHEET-FED GRAVURE PRESSES

Champlain Co., Inc., Bloomfield, N. J., announces acquisition of American rights from Linotype & Machinery Ltd. of London for manufacture of a complete line of sheet-fed gravure presses for producing single- and multi-color work. These English presses are said to incorporate many features which make for simplicity and speed quality work. Printing is done from thin copper plates; register gears are of a special type; drop fingers are fitted to assure the most exacting register and the doctor blade can be adjusted for leveling and angling to obtain the best results. These presses will be available in three sizes: No. 4 for handling sheets 26 by 40 in.; No. 5 for 22 by 30 in. and No. 7 for $11^3/_4$ by 19 in. They may be driven either horizontally or vertically.

CARTON TOP-SEALER

A high-speed top-sealing machine for automatic synchronization with preceding bottom sealing and filling operations is now being offered by the Battle Creek Bread Wrapping Machine Co., Battle Creek, Mich. This machine, Model T-60, which seals up to 90 cartons per minute, automatically receives the filled carton, applies the glue to the carton flaps, folds the flaps, pressure seals and dries them along a 12 to 16 ft. straightway dryer. All operations are performed in what the company terms a "continuous flow" action with no harsh, jerky motions to distort the package shape or cause wear and breakdowns. The machine handles packages vary-

Gaylord Boxes

MINIMIZE Your Shipping Risks . . .

Rough handling of your packaged product is an ever-present hazard.

But no matter how you ship—by rail, truck or air—Gaylord provides an extra margin of safety due to correct functional design, better materials, and precision manufacturing.

To minimize your shipping risks—insist on *packages by Gaylord.*

- Corrugated and Solid Fibre Boxes
- Folding Cartons
- Kraft Grocery Bags and Sacks
- Kraft Paper and Specialties

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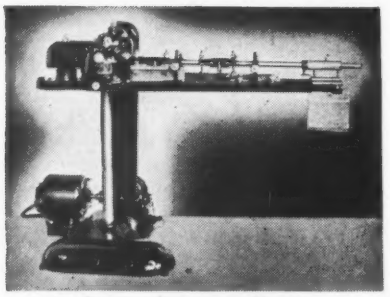
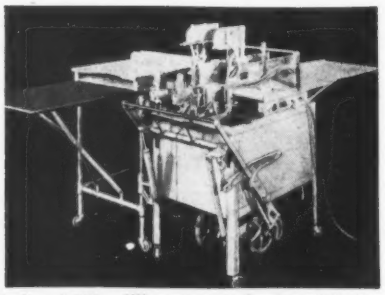
Amsco

SOLVES



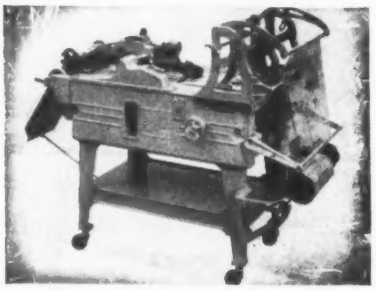
Amsco Automatic Rotary
Bag Sealing Machine

YOUR



Corley-Miller Wrapping & Sealing Machine

PACKAGING



Simplex Bag Making Machine

PROBLEM

YOU CAN cut costs and speed production at the same time—with Amsco Packaging Machinery. These three models are boosting efficiency in many plants right now. Other models for:

- bag sealing
- bag making
- bag and carton weighing and filling
- bag aligning and conveying
- wrapping
- sheeting and gluing
- sandwich making and wrapping
- hand and foot operated sealing devices

AMSCO PACKAGING MACHINERY

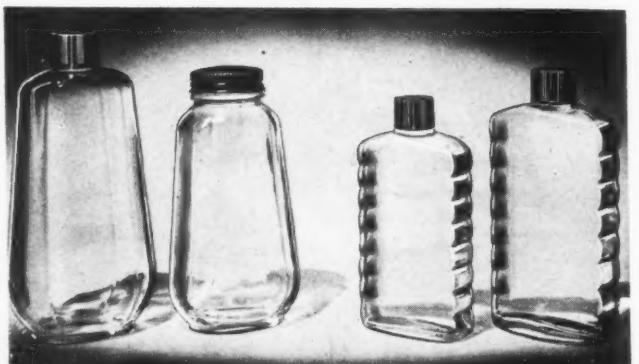
Amsco Packaging Machinery, inc.
31-31 48th AVE. • LONG ISLAND CITY 1, N. Y.

Equipment and Materials
(Continued)

ing in length from $2^1/_2$ to 10 in., in width from $1^1/_2$ to 7 in. and in thickness from $^3/_4$ to 4 in. by means of interchange of precision-made parts designed specifically for each carton. It may be equipped, if desired, with a double-entry intake.

NEW COSMETIC AND TOILETRY BOTTLES

Two new lines of bottles for cosmetic and toilet preparations have been announced by The Foster-Forbes Glass Co., Marion, Ind. The "Foster" line, molded in all sizes from $^1/_4$ to 16 oz., features a wide-base, smooth bottle which tapers



gradually upward to a slightly narrower shoulder. The 6- and 16-oz.-capacity bottles are furnished in both semi-wide (38-400, 43-400) and narrow finish. All other sizes are molded in customary finish sizes. The "Forbes" line is the designation for the bottle with the smooth label surface and serrated sides. These are furnished in a range of sizes from $1^1/_2$ to 16 oz. in narrow finish only.

LOW-COST PLASTIC DIPPING COMPOUND

Eronel Industries, Los Angeles, has announced a new low-cost hot-melt compound known as Thermo-dip N.S. for protecting metal products and parts such as machine tools, bearings, cutting tools, etc. The new strippable compound is said to be low in cost and to have a high tensile strength, great elongation and low melting point. Because of its pale amber color and transparency, identifying marks can easily be read. The material may be re-used, maintaining its flexibility and properties over extended periods, it is said.

CARTON MARKING MACHINE

Still another addition to the line of marking devices by Adolph Gottscho, Inc., New York, is the "Cartoncoda," designed to imprint automatically flat, folding paste-end or tuck-end cartons, cards, tags, etc. The outstanding feature of this device is its high rate of production—4,500 cartons per hr.—for imprinting code dates, control numbers, colors flavors, etc. It is adjustable to accommodate various sizes of cartons.

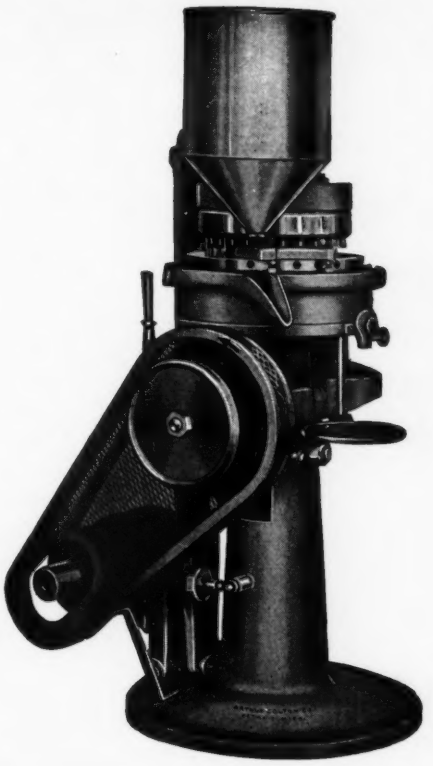
HEAVY DUTY ALUMINUM SCALE

Especially constructed to speed up packaging operations, the new Detecto-Gram aluminum speed scale made by Detecto Scales, Inc., Brooklyn, has a capacity of 20 to 30 lbs., a precision accuracy to $^1/_4$ oz. and beam graduations reading up to 1 lb. This sturdy scale, with (*Continued on page 194*)

NEW
ROTARY TABLET PRESS

New series 200–25 tablet machine embodies years of experience in building equipment, incorporates refinements giving an entirely new standard of performance.

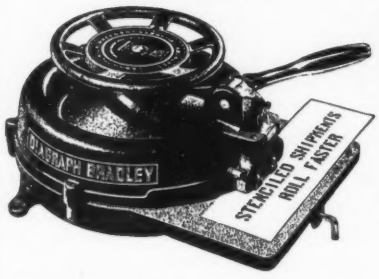
Special features include new variable lower punch pull-down track plus micrometer cell adjustment minimizing punch and die wear and practically eliminating capping; solid steel tie bar; centrally located main drive shaft; lower center of gravity. Range of operating speeds is provided by built-in variable speed drive. Power transmitted through lever operated disk clutch. Special drive materially reduces power consumption. Standard speed motor. Capacity per minute: 300–800 tablets. Diameter of tablet 3/16″ to 5/8″, maximum depth of cell: 11/16″. Floor space: 30″ X 36″, height: 60″, net weight: 1025 lbs.



ARTHUR COLTON COMPANY
2602 E. JEFFERSON AVE., DETROIT 7, MICHIGAN

Speed up Shipments with
STENCILING
BRADLEY'S

- *STENCIL CUTTING MACHINES*
- *STENCIL OILED BOARD*
- *STENCIL INKS*
- *STENCIL BRUSHES*



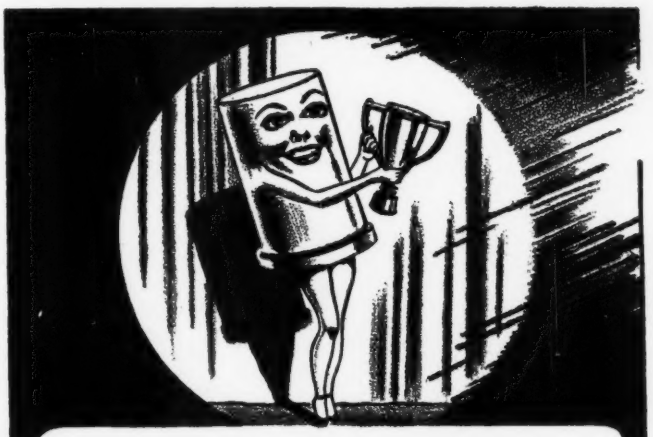
STENCILING YOUR SHIPMENTS WILL IMPROVE THEIR APPEARANCE AND SPEED DELIVERY.

●

We can furnish a machine to meet every requirement sizes ½″ to 1¾″ letters.

BRADLEY'S 5 IN 1 STENCIL INK IS INSTANT DRYING — NON-SETTLING. PROVIDES SHARP, CLEAR ADDRESSES ON CARTONS, CASES, ETC.

A. J. BRADLEY MFG. CO.
43rd Ave. & 9th St., L. I. City 1, N. Y.
SERVING YOU SINCE 1896



The Package that passed 167 Tests!

"Miss Container" was scientifically built by our designers and craftsmen; she, and her brother or sister packages made by Cambridge, are checked as many as 167 ways before production begins.

If *you* have a packaging problem remember this, *we* have 50 years' experience, and a specially trained staff of packaging engineers who are glad to talk to you about your particular requirements.

CAMBRIDGE Containers
CAMBRIDGE PAPER BOX COMPANY
PROVIDENCE CAMBRIDGE, MASSACHUSETTS NEW YORK
RECTANGULAR AND ROUND BOXES • PLASTICS • ALLIED PRODUCTS

One billion!

PACKAGE INSERTS

● Package Inserts are small in size, but, oh-so-big in accomplishment. The stories they can tell and the jobs they can do are myriad. They travel in the product package "for free"—no distribution cost. They get there, positively, with the product. They land right in the hands of actual, active users of your product . . . your best potential for repeat and additional business.

The one-billionth Package Insert designed and produced by Forbes might well have been one of those shown above. We passed that total some time ago. That represents a wealth of experience, ability and capacity which can be of inestimable help to you.

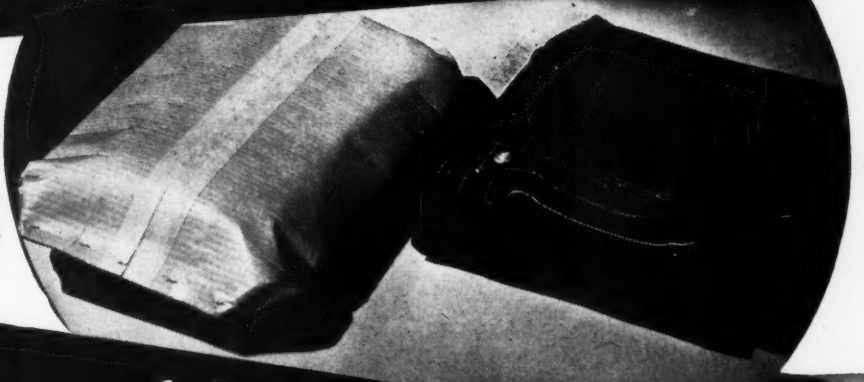
Just write, wire, phone or teletype. We'll put this experience to work for you pronto.

FORBES LITHOGRAPH CO.

NEW YORK CLEVELAND CHICAGO ROCHESTER

P. O. Box 513 Boston 2

PACKAGING COSTS SLASHED WITH Corroflex TUBE-TAINER*



That's right — the revolutionary new Corroflex TUBE-TAINER cuts packaging costs to a minimum.

Now for the first time, you can buy cushioned shipping containers in continuous rolls.

The new Corroflex TUBE-TAINER has the flexible cushion and sturdy outer covering which are famous for their money-saving advantages. You save in many ways with Corroflex TUBE-TAINER — save time through fewer and simpler packaging operations — save material through a closer-fitting container which eliminates dunnage — save shipping costs too.

Corroflex TUBE-TAINER both cushions and covers — provides an almost endless range of container sizes in a single roll. You simply cut off the length you want from a stock roll, slide your product in, tape, staple, or tie, and off it goes — protection plus and at what a *saving!*

Try Corroflex TUBE-TAINER in your own Shipping Department and see for yourself how this revolutionary new idea in packaging can save time, material, and shipping costs. Write for the free trial kit and photographic illustrations of short cuts in packing with Corroflex TUBE-TAINER.

*Patent applied for in U.S. and foreign countries • T. M. Reg. U.S. Pat. Off.

Sherman

PAPER PRODUCTS CORPORATION

Newton Upper Falls 64, Mass.

LOS ANGELES • NEW YORK • CHICAGO

NOW! *Please send me the TUBE-TAINER Free Trial Kit containing an assortment of 4 stock sizes and photographic bulletins on short cuts in packing.*

Sherman Paper Products Corporation
Dept. S-2
Newton Upper Falls 64, Mass.

Name_____

Address_____

City_____ State_____

Plants and People

A new plant housing the expanded carton and folding box manufacturing operations of **Marathon Corp.,** Menasha, Wis., is now in full production. Many advanced engi-

neering and production ideas are said to be incorporated in this one-story building covering 304,000 sq. ft. of space.

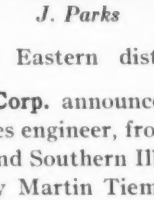
The plant equipment and personnel of **A. H. Ross Co., Inc.,** have been moved to the plant of the **Ohmer Corp.,** Dayton, Ohio. Both Ross and Ohmer are subsidiaries of **Rockwell Mfg. Co.** All correspondence pertaining to A. H. Ross Co., Inc., should be addressed to Box 998, Dayton 1, Ohio. **Norman M. Shaefer,** advertising manager of Ohmer Corp., has also been appointed advertising manager of A. H. Ross Co., Inc.

A. E. Murphy, executive director of the **Folding Paper Box Assn. of America,** has been awarded third place in the Sixth Annual John N. Van der Vries Award for Organization Achievement for his conduct of the association's labor relations program.

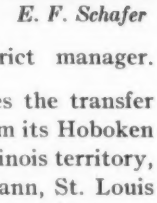
E. Hildreth

S. Davis

Owens-Illinois Glass Co., Toledo, announces the following promotions within the **Glass Container Div.: Eugene Hildreth,** sales manager to the food industries, has been appointed sales promotion manager, succeeding Kenneth C. White. **Sidney Davis,** Chicago branch manager, will succeed Mr. Hildreth as sales manager to the food industries. **E. F. Schafer,** Philadelphia branch manager, has been named to the newly created post of general branch manager, Toledo. Mr. Schafer is being succeeded in Philadelphia by **Wesley Adams,** former Philadelphia branch salesman. **Joseph Parks** will be manager of the recently combined Closure and Plastics Sales Div., with **Leonard Phillipps** as Eastern district manager.



J. Parks



E. F. Schafer

The New Jersey Machine Corp. announces the transfer of **James F. Parsons, Jr.,** sales engineer, from its Hoboken office to cover the Missouri and Southern Illinois territory, the area formerly covered by Martin Tiemann, St. Louis manufacturers' agent. He will make his headquarters in the Chicago office, 325 W. Huron St.

Norman R. Schoelles has been named vice president in charge of packaging for **J. Gordon Lippincott & Co.,** New York designers.

Reuter & Bragdon, Inc., Pittsburgh industrial design organization, announces the creation of a package service department, headed by **Edward J. Meyers.**

S. J. McGiveran, vice president of **Owens-Illinois** and general sales manager of **Kimble Glass,** announces that **Harlan Hobbs,** former manager of the Owens-Illinois Film Div. is now sales promotion manager of the Kimble Glass Div. of Owens-Illinois. The headquarters staff of Kimble Glass has recently been moved from Vineland, N. J., to Toledo. **Kenneth E. Robb,** former Kimble advertising manager, and **R. W. M. Ritter,** former market research representative of Kimble, will join Mr. Hobbs' staff.

H. Hobbs

C. M. Said has been named merchandising director for **McPhail Candy Corp.** Mr. Said was formerly general advertising director for Chase Candy Co.

Edward F. Burke has now joined the New York sales organization of **Shellmar Products Corp.**

F. Eastburn

Facil Fabrics Corp. announces that **Fred Eastburn** has been appointed general sales manager, with headquarters in the New York office. Mr. Eastburn was formerly connected with the New York sales office of The Dobeckmun Co. He has also been associated with the Sperry Corp., New York, and the Philco Corp., Philadelphia.

Packaging department supervisory personnel of the **Norwich Pharmacal Co.** recently received a special course in labeling operations, conducted by representatives of the **National Adhesives Division** of **National Starch Products, Inc.**

United Paperboard Co., Inc., New York, announce the appointment of **William H. Allen** as sales manager for their **Carton Div.** Mr. Allen will have his headquarters in the Madison Ave. offices of United Paperboard.

Frederick L. Bowser, formerly chairman of the Army Packaging Board and chairman of the Technical Committee on Packaging, Federal Specifications Board, and for the past several months consultant to the Bureau of Federal Supply on packaging materials and containers, has established in Washington a consulting and representation service, designed to assist manufacturers of packaging materials in supplying government agencies. His office is at 2800 Woodley Rd., N. W., Washington, D. C.

Reliable Tool & Machine, Inc., announces the merger of its production facilities with the engineering and sales organization of **Mercury Engineering Corp.,** the enlarged company to be known under the latter name. Announce-

If You Want to Stretch Your Packaging Dollar

There are several ways in which LUSTEROID vials and tubes make your packaging dollars go farther.

- Their feather-light weight cuts shipping costs.
- Their great strength eliminates the need for special partitioning and protective packing.
- Their printability saves on labeling because your message can be printed as an integral part of the package.

On top of these substantial savings, LUSTEROID provides product visibility with complete product protection, wide color selections to meet today's merchandising requirements, and standard sizes from ¼" to 1¼" in diameter and lengths up to 6". Cork, slip-on or screw-cap closures.

Write for details.

LUSTEROID CONTAINER CO., Inc.
Formerly Lusteroid Division of Sillcocks-Miller Company

Office and Factory
10 W. PARKER AVENUE, MAPLEWOOD, N. J.
MAILING ADDRESS: SOUTH ORANGE, N. J.

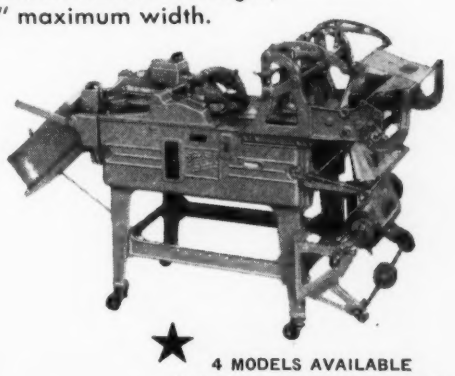
PROMINENT FOOD MERCHANDISERS USE SIMPLEX BAG MACHINES

For

Frozen Foods
Bakery Products
Potato Chips
Confections
Marshmallows
Paste Products
Peanuts
Popcorn
Candies
Soup Mixes
and other products

IF you package your products in bags made of cellophane or any of the thermoplastic coated materials, or laminated sheets, do as hundreds of the world's leading merchandisers do—make your own bags with a SIMPLEX machine. Buy the plain or printed material in rolls, make the bags in your own plant where you can exercise complete control over timing, quality, inventory and size.

You not only control the manufacturing operation, but you do it all at a saving in the cost of your bags. SIMPLEX bag making machines are simple to operate, adjust and maintain. The SIMPLEX is a high speed automatic machine which will produce up to 5000 heat-sealed, flat or gusset square bottom bags per hour, in sizes up to 12" in width and 20" in length, using rolls of 30" maximum width.

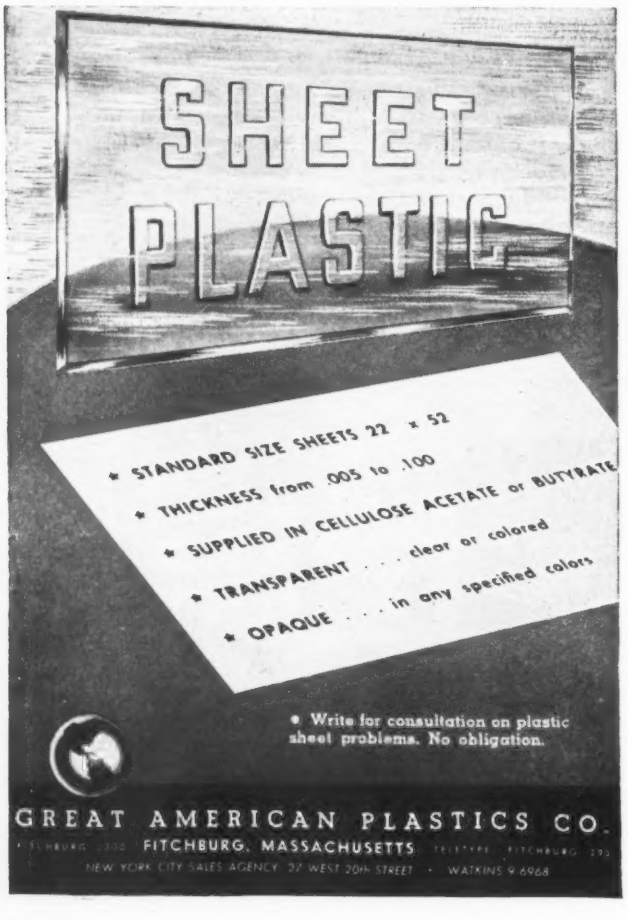


★ 4 MODELS AVAILABLE

Model 1 makes bags in sizes up to 9" wide by 16" long. Model 4 makes the larger sizes up to 12" wide by 20" long. Model 7 makes flat foil bags up to 10" wide by 7" long, while Model 10 makes the larger bags of foil or laminations employing foil.

Simplex
WRAPPING MACHINE COMPANY
534 23RD AVENUE · OAKLAND 6 · CALIFORNIA

WATLOW
STRIP UNITS
ELECTRIC
PRODUCTION HEATING
AT ITS BEST...
Engineered for
permanent fit
Send for
this catalog
Whether your heating requirements call for an exact local heat application—or for a large expanse, Watlow Units perform perfectly. Accurate temperature control and resistance to burn-outs. Watlow Strip Units are available in 1½" to 3" widths, 4" to 72" lengths, 115 V to 230 V ratings. Strip unit assemblies, in many types and sizes, are recommended for efficient convection heating.
SPECIALISTS IN
ELECTRIC
HEATING UNITS
WATLOW
ELECTRIC MANUFACTURING COMPANY
1340 N. 23d St. St. Louis 6, Mo.


SHEET
PLASTIC
• STANDARD SIZE SHEETS 22 x 52
• THICKNESS from .005 to .100
• SUPPLIED IN CELLULOSE ACETATE or BUTYRATE
• TRANSPARENT . . . clear or colored
• OPAQUE . . . in any specified colors
• Write for consultation on plastic sheet problems. No obligation.
GREAT AMERICAN PLASTICS CO.
FITCHBURG, MASSACHUSETTS
NEW YORK CITY SALES AGENCY 37 WEST 20th STREET • WATKINS 9-6968

Plants and People
(Continued)

ment is also made of a new Mercury plant in Milwaukee, a one-story building of fireproof construction, affording 27,000 sq. ft. of working floor space. Mercury Engineering Corp. produces paper cup and container machinery.

The Gummed Products Co., Troy, Ohio, announces the appointment of **Leo F. Supple** as manager of the company's expanded **Laminating and Coating Div.** This division will specialize in items suitable for the graphic arts and packaging industries. Mr. Supple, at one time president of the Springfield Glazed Paper Co., Springfield, Mass., comes to Gummed Products from the Reynolds Metals Co., where he was manager of the Unifoil Dept.

Kimberly-Clark Corp., Neenah, Wis., recently launched a 75th anniversary program in the form of a permanent organization for long-service employees. A total of 409 Kimberly-Clark people were certified into a corporation quarter-century club.

Franklin Folding Box Co., 769 Chauncey St., Brooklyn, manufacturer of automatic-type folding boxes, has been incorporated. **W. F. Kornfeld** is president of the new corporation and will be in charge of production. **Martin Rosen,** formerly with Interstate Folding Box Co., is vice president. Name of the new firm is Franklyn Folding Box Co., Inc., and address remains unchanged.

C. P. Joslyn, general manager of the **Chemical Products Div.** of **The Goodyear Tire & Rubber Co.,** announces that **E. E. Ellies** has been named assistant general manager of this division.

Polymer Industries, Inc., Astoria, N. Y., announces the appointment of **J. J. Austin,** with offices at Concord, Mass., as sales agent for New England to handle adhesives and impregnants for the paper converting industries. Mr. Austin was formerly with Dewey & Almy.

Industrial Packaging Co., Inc., manufacturer of paperboard and plastics containers, announces that its plastic department will hereafter operate as a separate entity under the name **Rich Brothers Corp.,** with **Bernard W. Rich** as general manager.

M. N. Allen

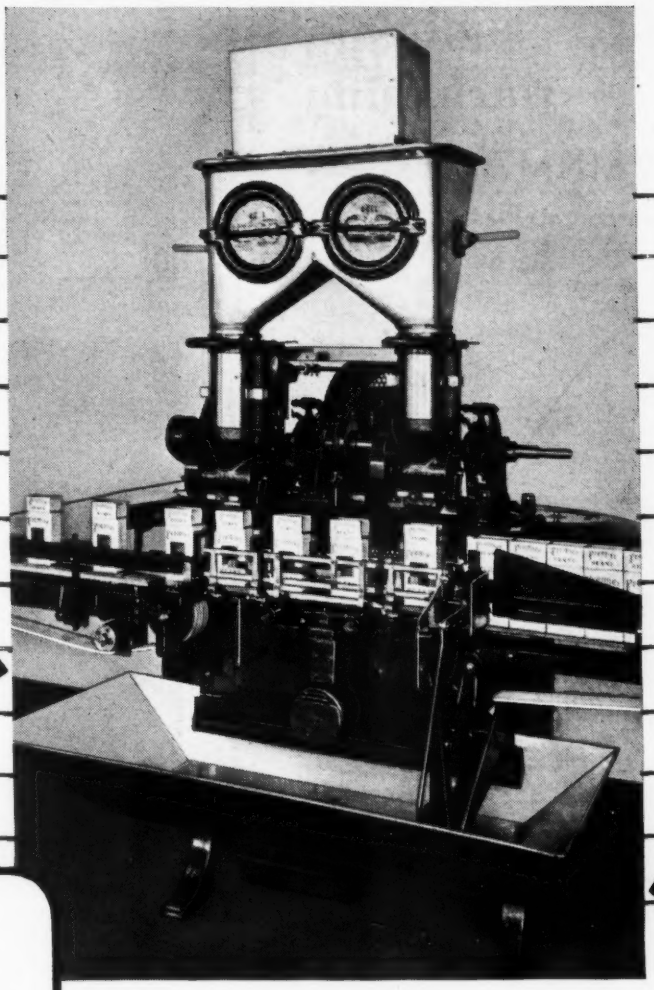
M. N. Allen of the **Package Machinery Co.'s** Chicago office, has resigned and plans to make his temporary residence in Saginaw, Mich. The duties of the Chicago office are now being handled by **Ernie Hjelm,** formerly in charge of the Atlanta office, and **Ed Wagner,** recently transferred from Springfield. **George Woody** replaced Mr. Hjelm in Atlanta.

Bulkley, Dunton & Co., Inc., announces the appointment of **Connie Woelky** as sales manager of their **Display Paper Div.** Mr. Woelky has been active for over 20 years in the display field.

Nashua Gummed & Coated Paper Co. announces the following changes in sales organization: **A. W. Sanborn,** formerly at the Philadelphia office, is now assistant sales manager of the Coating Division, Nashua. **R. P. Moody**

SEND YOUR PRODUCTION COSTS

DOWN



TWO SCALE GROSS WEIGHT WEIGHER

The Gross Weigher shown here is one of several models among which is a unit for handling most every type of non-abrasive product ranging from sticky brown sugar to free flowing rice. This type weigher operates at speeds ranging up to 35 per minute and is usually accurate to within 1/16 ounce. Ruggedly constructed and designed to perform with a particular product, it will operate with continual accuracy.

LOWER COST PER CONTAINER

WITH

PNEUMATIC WEIGHERS

For over fifty years Pneumatic weighers have been helping hundreds of producers throughout the world in their never ending task of keeping costs down. And in this period Pneumatic has accumulated invaluable experience and knowledge of the problems involved in handling practically all known types of materials, and developed exceptionally accurate methods of weighing them.

Beginning with the research work to be done on each order, down to the last assembly man checking out the machine for shipment, Pneumatic men have a crystal clear objective in mind of building a unit that will operate at "Lower Cost Per Container". This has grown to mean more than just an ideal, it has resulted in great savings in both time and money for many different companies.

PNEUMATIC SCALE CORPORATION, LTD., 82 Newport Ave., North Quincy 71, Massachusetts. Branch Offices in New York, N. Y.; San Francisco, California; Chicago, Illinois; Los Angeles, California.

PNEUMATIC **PACKAGING AND BOTTLING MACHINERY**

Over ninety different machines for the packaging of dry, free-flowing products and the cleaning, filling, capping and labeling of containers for liquids and semi-liquids

For Christmas and Holiday Packaging

WEINMAN

Transparent Plastic BOXES

For gift packages nothing can equal the "glamour" of transparent plastic boxes. Send for typical samples, new illustrated catalogue and packaging suggestions.

Weinman Brothers, Inc.

Est. 1919

325 N. Wells St. Chicago 10,

Some territories open for salesmen.

The Sophisticated Package

Lustrously black jars, ceramically transformed out of standard flint jars by our Glass-Crafters shop! The jet black is permanently fired-in and is really swank! Available from stock in 1, 2, 4, 8, and 16 oz.

another "SHOPPER STOPPER" by Braun

W. BRAUN CO.

Glass Containers and Closures

316 N. CANAL ST. • CHICAGO 6, ILL.

347 FIFTH AVE. • NEW YORK 16, N.Y.

Plants and People

(Continued)

has gone to Philadelphia from Nashua to succeed Mr. Sanborn. **W. H. Foster,** formerly assistant sales manager of the Coating Division, is now assistant sales manager of **Nashua Package Sealing Co., Inc. Harold W. Taylor** has been appointed sales research manager to succeed the late **Charles E. Foley.**

At the **American Meat Institute's** recent annual convention in Chicago, **Jack Manion** (left in photo), manager of the **Meat Packaging Division,** accepted on behalf of **Milprint, Inc.,** *Meat Magazine's* first annual **Meat Industry Accom-**

plishment Award. The award was given (see MODERN PACKAGING, Sept., 1947, p. 200) in recognition of Milprint's development of the Mil-O-Seal wrap for processed meats, called by the judges "the greatest single packaging contribution to the meat industry in the last 10 years."

Stein, Hall & Co., Inc., importers and manufacturers of industrial adhesives and raw materials, New York, announce the appointment of **William N. Kline, Jr.,** as manager of their branch office in Charlotte, N. C.

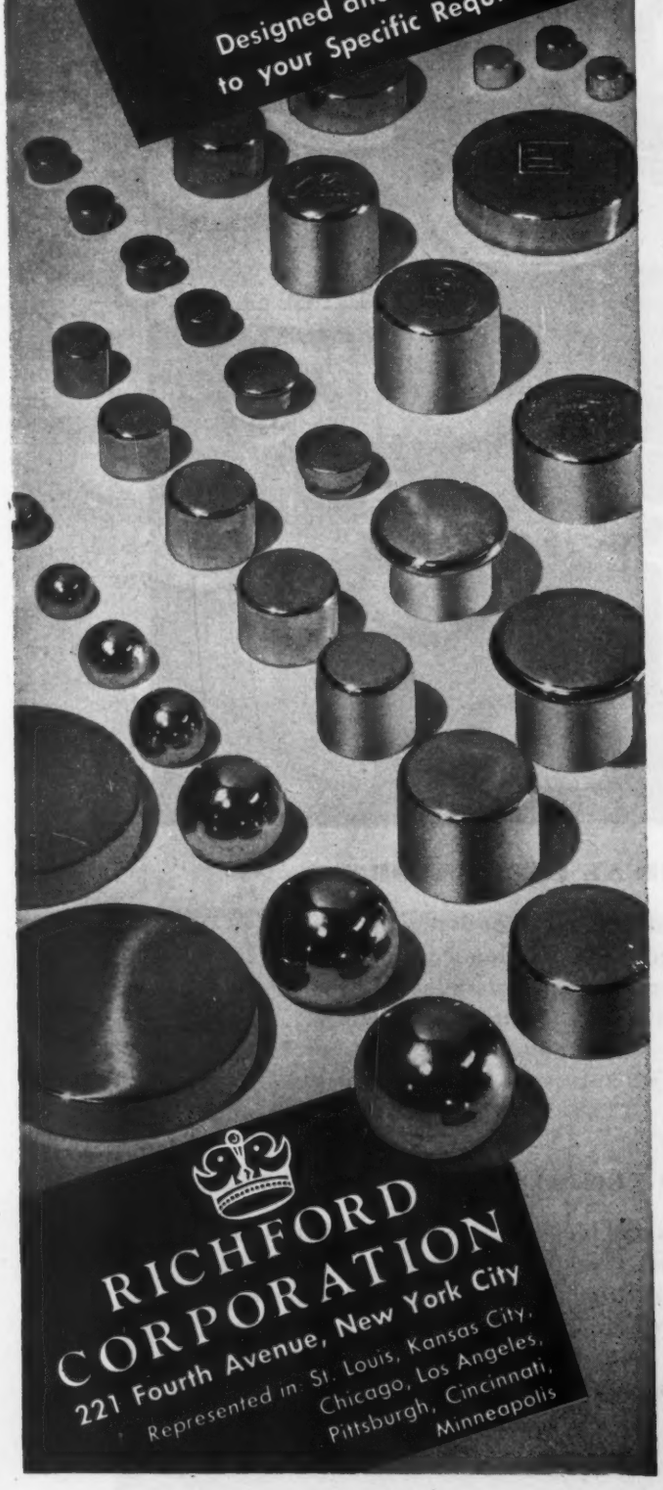
W. Ralston & Co., Inc., manufacturer of case liners, announces consolidation of the Niagara Falls, N. Y., and New Jersey plants, the new location being Old Bridge, N. J., with **George W. Chadwick** as general manager. Their sales office is at 220 E. 42nd St., New York, with **John D. Johnston** as sales manager.

F. L. Toof

Pillsbury Mills, Inc., announces that **F. Leslie Toof,** credited with being the first to develop paper containers for the shipment of shortening, has been named head of the Packaging Section of the Research and Products Development Department. For 16 years Mr. Toof was associated with Proctor & Gamble Co. and recently was in charge of packaging for the Carborundum Co.

Mid-Continent Sales Co., Minneapolis, wholesale distributor of container and packaging supplies, announces the purchase of a new and *(Continued on page 176)*

Top off
YOUR BOTTLE OR JAR *with a*
RICHFORD METAL CLOSURE
Any Size *Plain or Embossed* *Any Shape*
or
Designed and Manufactured
to your Specific Requirements



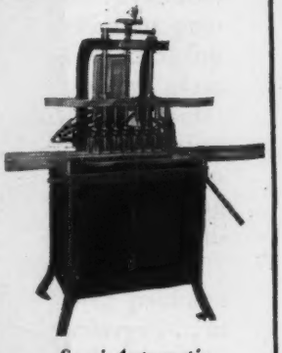
RICHFORD
CORPORATION
221 Fourth Avenue, New York City
Represented in: St. Louis, Kansas City,
Chicago, Los Angeles,
Pittsburgh, Cincinnati,
Minneapolis

THE TIME IS HERE TO CUT
PACKAGING COSTS and
MEET GROWING COMPETITION!

mrm *MACHINES WORK FOR LEADING PACKAGERS*

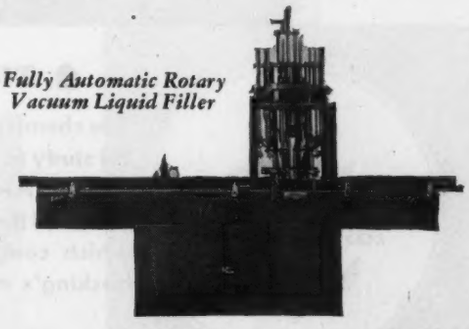
VERSATILE, ADAPTABLE FILLERS — For varied long, uninterrupted runs . . . at high speeds . . . for thin to foamy to viscous liquids . . . for *all* container types, sizes, mouth openings . . . yielding profitably high production quantities. PROMPT DELIVERIES!

For many years MRM has had outstanding experience in solving diverse *specific* filling problems. We are in close daily contact with the problems of all industries involving packaging. Our fillers are designed to operate with semi or fully automatic auxiliary equipment, and are built to give long life and *dependable service*.



Semi Automatic Vacuum Liquid Filler

Fully Automatic Rotary Vacuum Liquid Filler



- **MODERATELY PRICED TO REACH *ALL* MANUFACTURERS**
- ***NO SKILLED OPERATION OR MAINTENANCE NEEDED***
- **PARTS ARE SIMPLE—FEW—INEXPENSIVE**

CONSULT US ON YOUR PACKAGING PROBLEMS

mrm CO. INC. Dept. MP-107
custom designed and built fillers and conveyors
191-193 Berry Street, Brooklyn 11, N. Y.
EVergreen 7-3936

Anchor Hocking.....

THE CHEMICAL LABORATORY

The chemical characteristics of many foods require careful study to preserve their color, nutritional and vitamin values. Anchor Hocking chemists determine and recommend the most effective way to retain these values; which coatings, which liners, and which of Anchor Hocking's many styles of closures is the best to use.

THE BACTERIOLOGICAL LABORATORY

The services and facilities of Anchor Hocking's modern and completely equipped Bacteriological Laboratory are available to all glass packers in determining and correcting the causes of food spoilage and in solving problems of sterilization, processing, fermentation, heat penetration times and other problems of a similar nature.

.....serves to solve your Packaging Problems

IN a field as diversified and as rapidly growing as the glass packaging industry it is natural that new problems constantly arise.

For example, more and more products are being adapted to glass containers that never before were packed in glass. New products are being introduced with different chemical or physical characteristics. New preserving processes are being studied and perfected. New and more effective sealing compounds and liner materials are always coming into the picture, to be tested and checked. More and more packers are needing help in converting their production lines to most speedily, efficiently and economically handle glass containers.

Anchor Hocking's extensive, modern Package Engineering and Research Laboratories were created especially to help solve these and related problems...to better serve our customers and others interested in glass packaging.

In addition to the facilities pictured here there is an Engineering Department available to customers in developing an efficient production line; an Experimental Packaging Division which simulates a modern glass packaging pilot plant; an Assembly and Service Department for integrating production line equipment; a Package Design Department and a Carton Engineering and Testing Laboratory — all manned by skilled technicians who are specialists in their lines.

These unique controls for better package production are yours . . . *free of charge* . . . at Anchor Hocking.

Anchor
CONTAINERS and CAPS

PRODUCTS OF
ANCHOR HOCKING GLASS CORPORATION
LANCASTER, OHIO

Tune in "Crime Photographer" every Thursday evening, entire Coast-to-Coast Network, CBS.

Taber

SHEET PLASTIC FABRICATING MACHINES to

CREASING

FOLDING

BEADING

DRAWING

Taber machines are designed and engineered to give you all the features needed for rapid production — plus the precision required for repetitive uniformity.

Twenty-nine years' experience in this field — built into these machines — is your guarantee of the finest in plastic fabricating equipment to manufacture the following products from thermoplastic sheeting:

1. Square and rectangular plastic containers,
2. Seamless draw containers,
3. Beaded lap-joint cylinders,
4. Folded articles,
5. Special fabricated parts and shapes.

Write for this new literature with descriptions and illustrations of the equipment you need.

Taber

INSTRUMENT CORPORATION

119 GOUNDRY STREET NORTH TONAWANDA, N. Y.

Plants and people

(Continued from page 172) larger plant at 3318 E. Lake St., Minneapolis, to which it has moved from 600 15th Ave. So. **Jack Clancy** recently joined the Sales Dept.; **M. G. Craven** is advertising manager; **Britt Craven** is sales manager and **T. N. Weeks** is office manager.

E. T. Coopat

The appointment of **Edward T. Coopat** as sales manager of packaging equipment for **General Mills Mechanical Div.** is announced by General Mills, Inc., Minneapolis. Mr. Coopat was formerly Western sales manager for the Champlain Co., Inc.

The sales organization for General Mills packaging equipment includes **Packaging Industries** of Montclair, N. J., with sales offices in Boston, Baltimore and New York. **Henry L. Hanson** heads General Mills Chicago sales office.

Ball Bros. Co., manufacturers of glass containers and zinc products, announce the appointment of **Harold R. Clayton** as assistant general superintendent of the firm's Glass Div. at Muncie, Ind.

The new West Coast plant of Ball Bros., El Monte, Calif., is now turning out the Ball Mason fruit jar and an extensive line of commercial glass containers. Peak production will be 150 tons daily. **Hugh Crawford** is general manager of the new plant.

Celloprint, Inc., recently moved to 133-23 35th Ave., Flushing, N. Y., where they have their own new building.

Frank B. Fairbanks, president of the **Horix Mfg. Co.** for the past 10 years, died Sept. 13 at his home in Pittsburgh. Mr. Fairbanks was widely known throughout the packaging field, having served as president of the Packaging Machinery Mfrs. Institute and vice president of the Canners Machinery Mfrs. Assn. Educated at Tufts College and Harvard Engineering School and with engineering experience with Westinghouse and the United States Army in World War I, Mr. Fairbanks brought to the problems of packaging machinery a singularly well balanced outlook.

F. B. Fairbanks

J. Stogdell Stokes, president of **Stokes & Smith Co.** and a pioneer in the packaging machinery industry, died in Philadelphia Sept. 26 at the age of 77. He was president also of Durite Plastics, Inc.; vice president of Yarnall-Waring Co., makers of engineering specialties, and a director of Pennsylvania Salt Co. and the Provident Trust Co. In 1944 he was awarded the Franklin Institute's Edward Longstreth Medal for meritorious work in the development of the paper-box industry. He was one of Philadelphia's most prominent civic leaders, being president at the time of his death of both the Philadelphia Museum of Art and the Art Jury of Philadelphia.

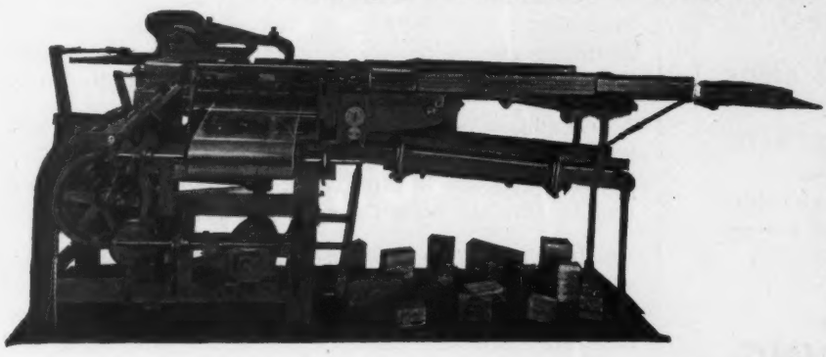
Alfred Stull Harris, president of the **Harris-Seybold Co.,** died in Cleveland Aug. 22 after several months' illness. Mr. Harris was 56 years old and had been with Harris-Seybold since 1923.

Julius F. Brenzinger, vice president of the **Max Ams Machine Co.** died Sept. 6. He was 79 years old.

CONCENTRATE ON PACKAGE APPEARANCE

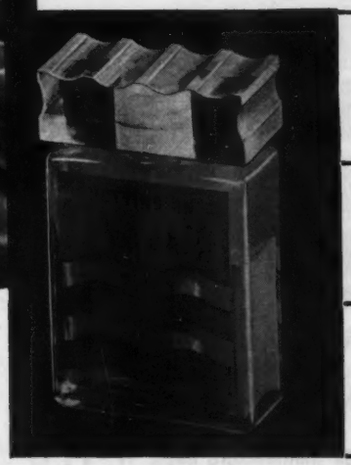
Packages must sell themselves on sight to the meandering Shopper, who acts on impulse for so much of her buying in self-service stores. Does your package meet this test? As you check the many details that are necessary for an outstanding package, do not overlook the importance of better overwrapping. The way the overwrap is placed around the carton, the manner in which the end folds are sealed, all contribute to the final appearance. Hayssen machines do a first rate job, speedily and economically. The folds are clean and sharp, the end seals stay sealed and look well, and the final ensemble has the desired eye-appeal. If you wish to learn more about Hayssen advantages, write the factory today. You will be under no obligation, of course.

HAYSSEN MFG. CO. SHEBOYGAN, WIS.



IT PAYS TO WRAP THE HAYSSEN WAY

HAYSSEN ELECTRONIC CONTROLLED WRAPPING MACHINES



Decorators and Printers

Creative means the finest decoration on your glass, plastic or metal container —

Creative means unlimited production facilities —

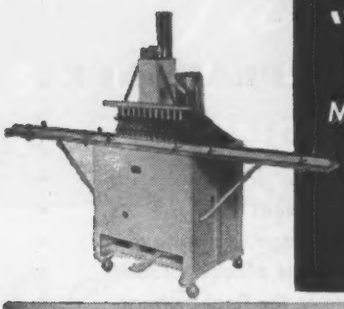
Creative means an expert technical staff to solve your printing problem.

Creative PRINTMAKERS, INC.

200 VARICK STREET, NEW YORK 14, N. Y. • WALKER 5-6300

SURFACE DECORATORS FOR THE PACKAGING FIELD

In Canada: 2424 Yonge Street, Toronto, Ontario



The New
"ESA"
MULTIPLE SPOUT
VACUUM
BOTTLE
FILLER

EASILY ADJUSTED NO DRIP SPOUTS

ALLOWS OPERATOR USE OF BOTH HANDS

TOTALLY ENCLOSED MOTOR UNITS

Here's the answer to your bottle filling requirements. The Ertel ESA, in the low price field, will fill bottles accurately and economically. Write for full information on this quality-engineered Ertel unit.

ERTEL
ENGINEERING
CORPORATION
KINGSTON NEW YORK

New York City Sales Office: 40 West 48th Street, New York 19, N. Y.

ASBESTOS FILTER SHEETS • ASBESTOS SHEET FILTERS
BOTTLE FILLERS • PORTABLE MIXERS • PLASTIC PUMPS

MANHASSET

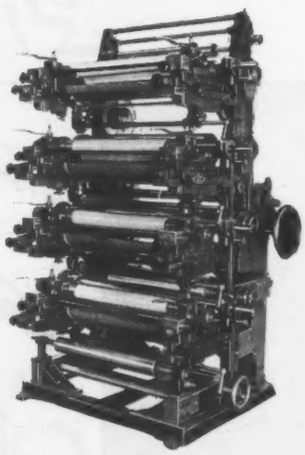
(REMEMBER THIS NAME)

ANILINE PRESSES

2, 3 & 4 COLOR

Press illustrated has these improvements —

1. Easy to throw ink rollers in or out of contact—without disturbing original setting.
2. Easy to throw plate cylinder in or out of contact with impression cylinder.
3. Easy to throw ink roller in or out of contact with plate cylinder.
4. Easy to raise or lower ink pot.
5. Vertical & horizontal register while press is in operation.
6. Can be used as a roll press or directly with bag machine.



Model AP-424

We also manufacture bag machines and rewinders

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For Your Information

Attendance at all future conferences of the **American Management Assn.** will be limited to members. **Alvin E. Dodd,** president, expresses the hope that non-members "will agree to the justice of giving this preference to our members, whose dues make these meetings possible." The new ruling will affect the 1948 Packaging Conference in Cleveland, but will not affect the Exposition, which will be open as usual to all interested persons. At present the conference is scheduled for April 27 to 29 and the exposition for April 26 to 30, but there is some talk of extending the conference program also over the entire five days. The events will be in the Cleveland Auditorium.

A new edition of the **"Bottling Engineer Handbook"** has been prepared by the **U. S. Bottlers' Machinery Co.,** Division C, 4015 N. Rockwell St., Chicago 18. Copies may be obtained from the company upon request.

An illustrated folder has been prepared, describing the weathertight welded-steel shipping containers recently developed by **Dravo Corp.,** Neville Island, Pittsburgh, to facilitate material handling and minimize pilferage losses in marine, rail and motor-freight transportation. Copies of the bulletin, No. 220, may be obtained from the firm.

Charles W. Williams & Co., Inc., 303 Lafayette St., New York, have issued two booklets containing samples of box covering papers. One covers embossed and plain Satintone and the other, Pastella coverings.

The **22nd Annual Meeting** of the **Western Growers Assn.,** which is expected to deal with the organization's prepackaging program, is scheduled for Nov. 12 to 14 at the Biltmore Hotel, Los Angeles.

New York University announces a course in **"The Anatomy of Eye Appeal in Product Design, Packaging and Advertising,"** to be conducted by **Egmont Arens.** The class will meet from 8:10 to 9:55 P. M. on Wednesdays from Sept. 24 to Jan. 14. Provision *(Continued on page 182)*

What's doing

Oct. 14–17—**International Brewing Industries Exposition,** Public Auditorium, Cleveland.
Oct. 18–23—**National Wholesale Druggists Assn.** Ambassador Hotel, Atlantic City.
Oct. 21–25—**Pacific Chemical Exposition & Conference,** Civic Auditorium, San Francisco.
Oct. 27–29—**International Assn. of Ice Cream Mfrs., Annual Convention,** St. Moritz Hotel, Miami Beach.
Nov. 10–12—**Grocery Mfrs. of America, Inc., Annual Meeting,** Waldorf-Astoria Hotel, New York.
Nov. 12–14—**Western Growers Assn., Annual Meeting,** Biltmore Hotel, Los Angeles.
Nov. 17–21—**American Bottlers of Carbonated Beverages,** Atlantic City.
Nov. 18–19—**Ninth Annual Forum, The Packaging Institute,** Hotel Commodore, New York.

other purposes about the store.

Photos courtesy Union Bag & Paper Corp.

4. *At the refreshment counter...* in stores, hotels, restaurants or in the home, cubed ice that's packaged for easy handling is appreciated.

Yes, Cyanamid's PAREZ Resin 607 has helped create another big, profitable market for paper manufacturers! Now it's "one-trip" wet-strength paper bags for the efficient marketing of cubed and sized ice to homes, restaurants, hotels and food stores.

No longer must the ice manufacturer buy and maintain returnable-type containers that have to be sterilized and stored for future use. Customers, too, like these strong, drip-proof paper bags that make processed ice easy to buy and handle.

Along with their increased sales and profits, paper manufacturers find PAREZ Resin 607 extremely easy to use. Simply added during the paper manufacturing process, it imparts increased wet and dry strength . . . improved tensile and bursting strength . . . added folding resistance . . . enhances the versatility and usefulness of the paper in general.

Is your business paper or packaging? Then consult Cyanamid's Technical Service representatives. They'll gladly show you how PAREZ Resin 607 can improve *your* products . . . open to *you* the new and profitable markets this remarkable resin is finding for paper.

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Industrial Chemicals Division **AMERICAN CYANAMID COMPANY**

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DISTRICT OFFICES: Boston, Massachusetts; Philadelphia, Pennsylvania; Baltimore, Maryland; Charlotte, North Carolina; Cleveland, Ohio; Chicago, Illinois; Kalamazoo, Michigan; Detroit, Michigan; St. Louis, Missouri; Azusa, California; Seattle, Washington. In Canada: Dillons Chemical Company, Ltd., Montreal and Toronto.

†Trade-mark of American Cyanamid Company covering its synthetic resins for use by the paper industry. The processes under which PAREZ is applied in the production of wet-strength paper are covered by U. S. Patents Nos. 2,291,079, 2,291,080 and 2,345,543 and U. S. Patent Application Serial No. 453,032.

For low-cost chemical equivalent of distilled H_2O . . . FILT-R-STIL* Demineralizing Units.

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An Invitation from
Crawford *Engineers*
To Package Makers and Paper Converters

Crawford *Engineers* — Now can serve several more companies, each intent on leading its respective field of PAPER PACKAGE MAKING. "CRAWFORD-ENGINEERED" means "one-of-a-kind". Only the few wanting the most modern package production methods should ANSWER THIS ADVERTISEMENT.

Crawford *Engineers* — Design and build special, highest-speed machinery AROUND the package, bringing freedom from ordinary mechanical standards. Working from paper or board roll, CRAWFORD develops ALL PRINTING AND CONVERTING METHODS, and delivers COMPLETE CONTINUOUS MECHANICAL MEANS for superior printed package production.

Crawford's *56 Engineers* — whatever your printing and converting problems, are the single such COMPLETE SCIENTIFIC TEAM of package pioneers: expert in Mechanics, Electronics, Chemistry-Colors, Plastics, Thermodynamics and Air-Conditioning; for Treatment of Printing, Coating, Laminating; Creasing or Cutting of Paperboard, Paper, Foil or Film.

Consult

SYRACUSE, N. Y. **Crawford *Engineering*** TROY, N. Y.

Correspondence is invited. Representatives in Principal cities.

Patents Nos. 2,271,879, 2,271,880 and 2,345,345 and U. S. Patent Application Serial No. 453,032.

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. . . a half-century of experience with filling and capping equipment that brings these advantages to you—

- Durability of Elgin fillers and cappers proved by the rugged test of years.
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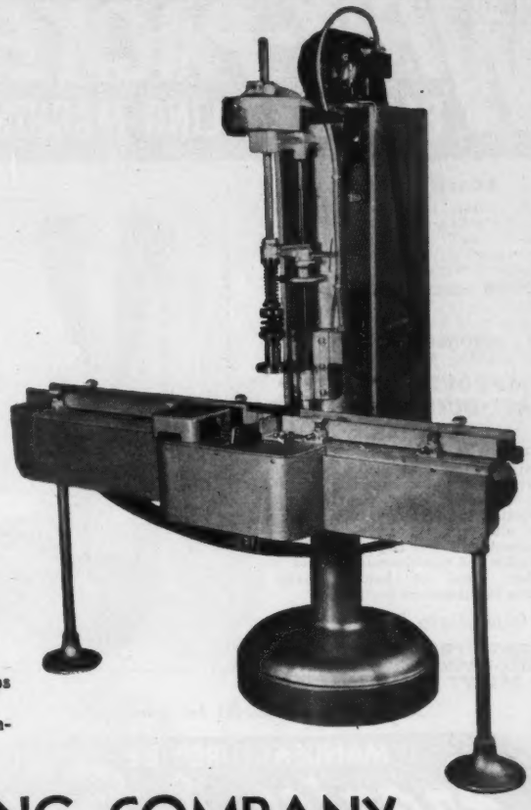
- Production "know-how" that means lower initial cost . . . minimum operating costs . . . outstanding production benefits.



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Tightens all sizes "CT" and Lug caps uniformly to any desired tension.
Handles all sizes and shapes containers including gallons.
Quick simple changeover.

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are your shipping containers **DEADHEADING?**

"Deadheading" is railroad language for riding free on the company's time. The men who do this are going somewhere for the railroad's good, but while they're travelling the railroad isn't profiting any.

Why let your shipping containers deadhead on you? You can easily turn them into travelling salesmen, press agents or billboards and make them pay their way. Consult Jas. H. Matthews & Co.'s Design Service for aid in making your shipping containers do a real selling job. See our representative in your vicinity or write the nearest branch office.

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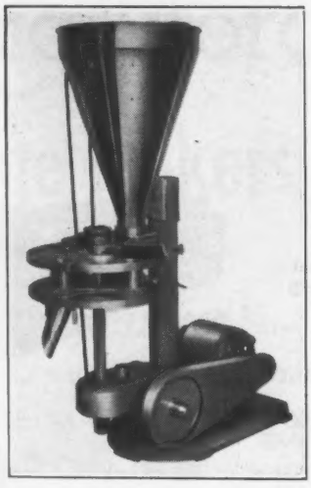
WHIZ-PACKER
PACKAGE FILLING MACHINES

BENCH MODEL B-1

Fills tiniest containers up to six ounces with powders, nuts, crystals, candy, seed spices, noodles, etc. Accuracy within 1/32 to 1/16 ounce. Weight 100 lbs.

OTHER MODELS: B-2 fills containers up to 2 lbs., B-3 up to 5 lbs. B-4 up to 10 lbs.

ALL MODELS: Speed of 12 to 104 per minute. ¼ H.P. motor.



IMPROVED MODELS • FAST•QUIET•ACCURATE • INEXPENSIVE

The new models retain the sturdy simplicity of previous models. Driving mechanism runs in a bath of oil, eliminating wear, giving smoother, quieter operation. Cups are aligned with discharge spout automatically. It is practically impossible for machines to get out of order. Used by leading firms. Write for literature and prices.

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D.B.

For Your Information
(Continued)

(Continued from page 178) can be made to attend single lectures, several of which will be devoted to package design. Further information may be obtained from Prof. S. G. Roth, 100 Washington Sq. E., New York.

Better Packages, Inc., Shelton, Conn., manufacturer of sealing-tape machines and label and envelope moisteners has just published an illustrated booklet to serve as a guide to more efficient shipment sealing and tape application. Copies may be obtained from the company.

The Electric Industrial Truck Assn., 29-28 41st Ave., Queens Plaza, Long Island City 1, N. Y., has published a new booklet "Looking Beyond the Price Tag," which is being distributed by its member companies.

The chairman of the exposition committee of **The Society of the Plastics Industry, Inc.,** Nelson E. Gage, has announced that the Third National Plastics Exposition will be at Grand Central Palace, New York, in Sept., 1948.

The Plastics Div. of the **American Cyanamid Co.** has recently published an illustrated four-color booklet describing the company's Laminac laminating resins. Copies may be obtained from the company at 30 Rockefeller Plaza, New York 20.

National Adhesives, 270 Madison Ave., New York, have issued a new booklet containing complete instructions for handling a specially formulated machine glue for use on cigarette tax-stamping machines. Copies are available upon request to the company.

Tennessee Eastman Corp. announces publication of a completely revised edition of the book, *Tenite,* concerning the company's cellulose ester thermoplastics. Copies may be obtained from the company at Kingsport, Tenn.

National Canners Assn., Washington, D. C., announces the purchase of property in Berkeley, Calif., totaling 23,000 sq. ft., on which it is planned to locate a new Western Branch Laboratory building. The new facilities will enable centralization of operations and care for their expanded program of research in canning technology.

Interested shippers may receive copies of two new publications by the **Assn. of American Railroads**—Pamphlet No. 14 titled **"Rules Regulating the Safe Loading of Freight in Closed Cars and Protection of Equipment"** and Pamphlet No. 41, **"Dictionary of Standard Terms for Use in Describing Loading and Bracing Methods for Shipments of Commodities in Closed Cars."** Requests for copies should be addressed to the Secretary, Freight Loading & Container Section, AAR, 59 E. Van Buren St., Chicago.

The AAR has also issued a pamphlet, **"Retaining Paper Method of Unitized Loading,"** which illustrates and describes this new development in carloading. Copies of this General Information Series No. 509 are available.

The Market Guide for Purchasing Agents Publishing Corp., 385 Fifth Ave., N. Y., plans to issue during this winter a directory for buyers of boxes, paper and paper products listing sources of supply and offering a series of services, gratis, to advertisers and purchasing agents. A "Buyers Service" will also be maintained.

OUR ENGINEERS SOLVED FUEL PROBLEMS TO KEEP UP YOUR GLASS SUPPLY

Maintaining a steady flow of containers to meet our customers' schedules is often more than a question of obtaining raw materials. During a recent fuel shortage, one of our glass plants faced a 50% curtailment of natural gas . . . the chief fuel for operating furnaces, feeders, ovens, and lehrs. A major production crisis developed and deliveries were threatened. We called on our Engineering Department for help, and they quickly installed fuel oil equipment on one furnace and put into operation a standby gas producer for another. Then a coal shortage developed which cut out the gas producer, and our engineers installed oil equipment on the second furnace. We thought we had the problem licked. Just about that time, the gas company ordered a 90% fuel curtailment, and with that allotment we could operate only 75% of our feeders and lehrs.

Then one of the engineers on the job disappeared. He hadn't deserted ship, for several days later he showed up with the answer to our problem. He had located and bought several oil gasifiers. We installed them promptly to furnish heat for the lehrs, feeders, and ovens, and as a result our service to customers was re-established on a normal basis.

When it comes to glass and closure problems, our large staff of technically trained men are resourceful above all. If you have a glass container problem, don't hesitate to ask for help. Engineers, designers, and chemists will gladly pitch in and provide you with the best answer experience and modern science can provide. For further information on any of Armstrong's glass or closures, contact your Armstrong representative or write direct to Armstrong Cork Co., Glass and Closure Division, 6510 Prince St., Lancaster, Pa.

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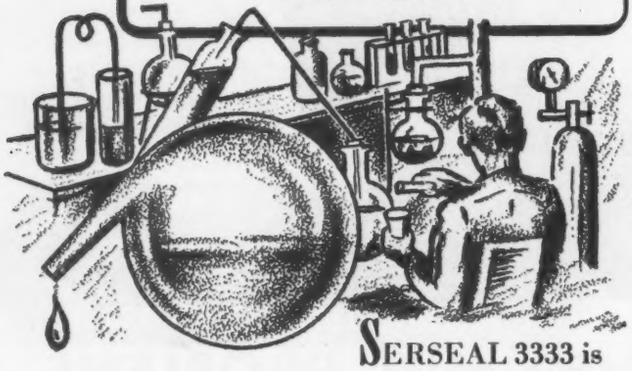
SERSEAL 3333
CONCENTRATE
FOR SPECIAL APPLICATIONS

DESIGNED
TO MAKE GOOD
MINERAL WAXES
BETTER!



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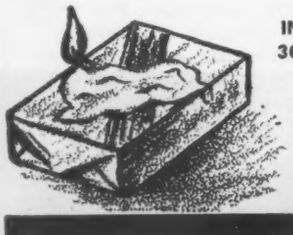
SERSEAL 3333 has an excellent compatibility ratio with all mineral waxes to formulate coating, laminating and heat sealing compounds of the highest quality.

SERSEAL 3333 is the answer to problems of flexibility, controlled viscosity, moisture and moisture vapor resistance, adhesion, cold flow and heat seal. When blended with good waxes SERSEAL 3333 produces compounds of superior quality, assures positive performance and greater economy.



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IN 35 POUND PAPER BULKANS,
30 GALLON 28 GAUGE DRUMS,
CARLOADS OR LESS

Samples upon request

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U.S. Patents Digest

Edited by H. A. Levey

This digest includes each month the more important patents which are of interest to those who are concerned with packaging materials. Copies of patents are available from the U. S. Patent Office, Washington, at 25 cents each in currency, money order or certified check; postage stamps are not accepted.

Package of Rolls of Sheet Material, J. D. Conti (to American Viscose Corp., Wilmington, Del.). U. S. 2,424,553, July 29. A shipping package for nonfibrous sheet material comprising a roll of nonfibrous sheet material having a hollow core, an arbor passing through said core and projecting therefrom at each end, stiff perforate discs of diameter larger than the roll threaded on the arbor adjacent each end of the roll, a lock collar secured to each projecting end and pressing securely against the discs, a protective liner of nonfibrous sheet material completely enclosing the roll, its ends folded over and closely wrapped about projecting ends of the arbor and lock disc inserted over each wrapped end.

Cutting Apparatus, D. M. Curtis (to American Viscose Corp., Wilmington, Del.). U. S. 2,424,555, July 29. Means for cutting continuous filaments in discontinuous lengths, means for delivering material to cutting means, means for interrupting delivery of material to cutting means and means operated upon interruption of such delivery for maintaining a predetermined minimum tension in material proceeding from delivery means.

Paper Moistening Dispenser, H. M. Herman, Steger, Ill. U. S. 2,424,565, July 29. A dispenser having a liquid container movably supported and openings in its upper end, a material-roll supporter adapted to direct material against liquid container to move liquid container in its passage over same and a spring bumper engaging liquid container for retarding its return.

Slide Box with Slidable Latch, H. G. Towne and L. M. Peterson (to Dennison Mfg. Co., Framingham, Mass.). U. S. 2,424,642, July 29. A box comprising a casing having a top wall, a tray slidable within said casing from a retracted position inside the casing, top wall of said casing being formed with an opening at an angle to line of travel of said tray, tray being formed with an opening adapted to underlie the casing opening when tray is in extended position and a lock movably mounted in the tray.

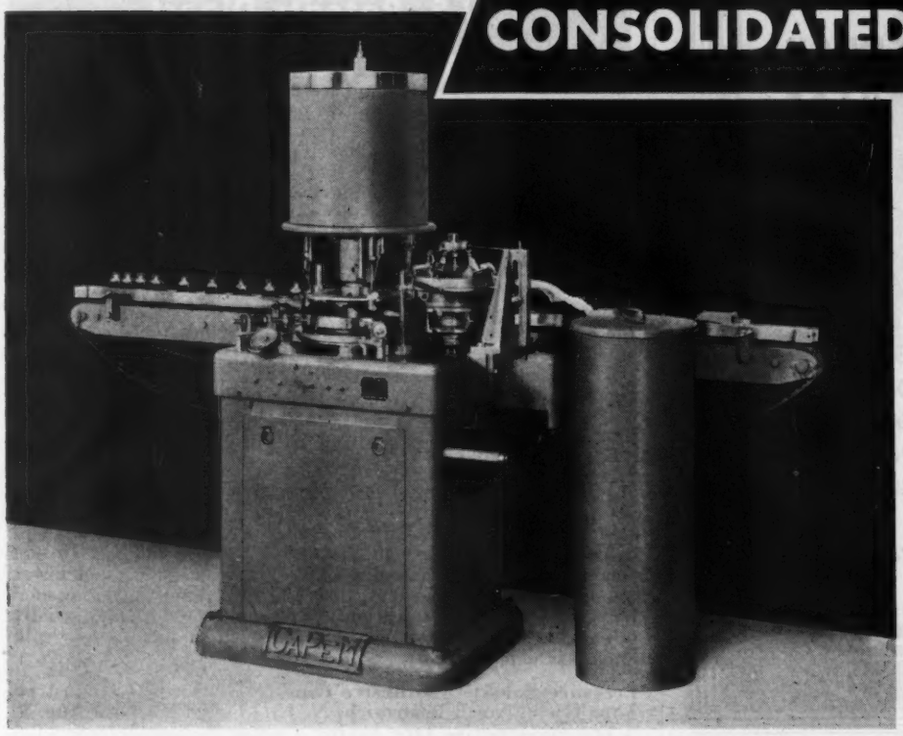
Foldable Cardboard Box, R. F. Smart, St. Louis, Mo. U. S. 2,424,716, July 29. A foldable cardboard box composed of a one-piece blank forming a box bottom, two spaced parallel side walls and two spaced parallel end walls having integral hinge connection with opposite side and end edges, respectively, of said bottom, hinge tabs having integral hinge connection with opposite ends of said respective side walls including attaching portions at lower ends of said hinge tabs connected with lower portions of said end walls, leaving side and end walls movable vertically.

Merchandise Display Card, M. Loeb, New York, N. Y. U. S. 2,424,762, July 29. In combination, a display card, an article of hardward flatly fitting against the front face of said card, said article having two rows of screw-receiving openings therein, fastening screws having shanks freely passing through the respective openings with their heads interposed between front face of card and rear of article, said card having slots therein beyond respective ends of article.

Closure Means for Containers, L. T. Crabbe and D. C. Lathrop (to Phoenix Metal Cap Co., Chicago, Ill.). U. S. 2,424,801, July 29. The combination of a container having a neck terminating in a mouth surrounded by a lip having a flat sealing face, outer portion of said flat sealing face having a shallow recess formed therein extending circumferentially of said lip and having substantially parallel end walls, said recess at its inner side terminating at a uniform distance from inner edge of lip to provide a continuous flat sealing surface at inner portion of lip, a cap having a dome-shaped top and a depending skirt at outer edge of said dome, said skirt and neck having cooperating devices whereby cap may be secured to container.

Variable Capacity Folding Box, J. Fuehrer, Moodus, Conn. U. S. 2,425,034, Aug. 5. A box made from one sheet of paperboard cut and provided with fold lines to form a central section; a right hand end section including a bottom, a left hand end section and front and rear wall panels; right hand section having a bottom panel extending from one side of the center bottom panel, an end panel, a top panel and front and rear panels extending from opposite sides, front and rear panels having end margins extending as far as the plane of the adjacent edge portions of said

CONSOLIDATED KOTTONERS



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- Follow the basic design of the famous CAPEM line of automatic cappers.
- Meet the broadest possible range of requirements.
- Capacities range from 40 to 100 containers per minute.
- Protect sterility of wadding.
- Wadding easily removed from bottle by consumer.
- May be changed from one size container to another in 15 minutes.

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WILL CUT REGISTRATION TIME!

The simple fool-proof operation of the OPTI-CHEK will cut your registration time in half and eliminate idle presses . . . for color registering is done *off* the press and once your plates are in printing position the job is ready to run with no further adjustments necessary. Two OPTI-CHEK models are available — Model F for use with flat-bed presses and Model R for use with rotary presses.

ALSO SEE US FOR the very latest Cottrell-Heinrich press for printing in aniline, gravure or letterpress . . . in any order or combination.

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Write for folder on either Model OPTI-CHEK or for further information on the Cottrell-Heinrich press.

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Male or female to design quality line of fine boxed writing paper—both packages and contents—sold in better stores everywhere. Prefer designer with experience in either stationery or cosmetic field. Give past experience, salary desired, and send samples of your work if possible. The position open is in our Los Angeles factory. All replies strictly confidential.

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That's not double-talk. The right finish is important to your package—makes your package a leader in the competitive market. The best-looking colors, the most effective designs need the sparkling richness of good coating or the distinctive charm of embossing or die-cutting. Crawford excels at making your package a work of finished art. Our special process, "LUSTRALITE", provides the premier coating for gloss and protection.

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Attract the shopper's eye . . . up your sales by stressing your product's selling features. Everett bags in high quality DuPont cellophane, glassine, etc., and transparent plastic containers are available in any size or quantity.

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U.S. Patents Digest
(Continued)

center section; said left hand section having a bottom panel extending from the opposite side of panel and front and rear panels extending from opposite sides of end panel; front and rear panels having end margins extending as far as the plane of adjacent opposite edge portions of center section; a flap extends from top of center section front panel and from center section rear panel, said flaps forming top cover for central section.

Piercing Device for Filling Batteries, G. E. Eckman (to American Can Co., New York, N. Y.). U. S. 2,424,807, July 29. A piercing implement for a container holding a battery therein comprising a piercing member mountable on said container and including a stem thereon, said stem having a passage therethrough, an intake pipe attached to said stem on one end of said passage, said pipe being arranged for attachment of a filling tube thereon, a piercing pipe for piercing and connecting interior of container on which stem is mounted at other end of said passage and means for attaching member to container.

Leakproof Stopper, J. J. A. Jackson, Black Diamond, Wash. U. S. 2,424,930, July 29. A stopper to be used in a container, comprising a body portion, a tubular insert in said body portion, said insert having a longitudinal passageway therethrough and extending entirely through the body portion from end to end thereof for escape of air and gases from container, said insert having an enlargement at its upper end with an axially threaded bore, a valve seat at inner end of threaded bore, a valve axially adjustable in the threaded bore for opening and closing said longitudinal passageway.

Pressure-Sensitive Adhesive Tape, V. N. Morris (to Industrial Tape Corp., North Brunswich, N. J.). U. S. 2,424,996, Aug. 5. A pressure-sensitive tape having a paper backing impregnated with a hydrophilic proteinaceous impregnant, a hydrophobic pressure-sensitive adhesive mass on one side of said backing, a priming coat between said backing and adhesive mass, said priming coating comprising particles of hydrophobic vulcanized rubber which has an affinity for both the impregnated hydrophilic backing and hydrophobic adhesive mass.

Container, G. A. Moore, New York, N. Y. U. S. 2,425,043, Aug. 5. A tubular body formation adapted to be erected into a container with hermetically sealed ends, which comprises an outer blank of reinforcing paperboard having score lines defining side and end panels, an inner liner of laminated sheet material consisting of a heat-sealable web and a fibrous sheet, latter being laminated to outer side of paperboard material.

Container-Sealing Apparatus, W. C. Johnson (to Quaker Oats Co.). U. S. 2,425,062, Aug. 5. In a carton-sealing machine including means for conveying a series of cartons in a predetermined path, means for subjecting closure portions of said cartons to heat and pressure and means for cooling said closure portions while said cartons are moving in said path.

Carton-Sealing Apparatus, D. Kirk (to Quaker Oats Co.). U. S. 2,425,064, Aug. 5. In a machine for heat sealing cartons of rectangular cross section having integral flaps on side walls thereof adapted to be overlapped to form end closures therefor, said flaps having a coating of thermoplastic composition, the improvement which comprises, in combination, means for conveying said cartons, means for folding a first pair of opposed flaps of each carton inwardly into substantially the same plane, separate reciprocable means for folding each of the second pair of opposed flaps in overlying relation to first pair and to each other and means for applying sufficient heat and pressure to exposed surfaces of overlapped carton flaps to cause composition to flow into cracks and crevices between and adjacent said flaps.

Apparatus for Sealing Containers, R. E. Lowy and J. L. Ferguson (Container Corp. of America, Chicago, Ill.). U. S. 2,425,067, Aug. 5. Apparatus for top-sealing cartons having thermoplastic sealing compound on top closure flap thereof comprising a plurality of carton-receiving stations, means for moving said stations intermittently in a closed path with intervening periods of dwell at predetermined positions and means for successively introducing cartons into and removing cartons from said stations at certain positions.

Non-Refillable Container, S. Freedman and A. Bradin, Asbury Park, N. J. U. S. 2,425,148, Aug. 5. In a non-refillable bottle having a neck portion with opposed locking recesses formed in the inner wall therof, a plug body insertable in said neck portion formed with a longitudinally extending bore and opposed depending resilient arms formed with laterally extending locking ears adapted to seat in opposed locking recesses, said plug being formed with an enlarged chamber having an annularly sloping

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Container users seeking relief from high labor costs and production bottlenecks find it in the Knowlton Automatic Convolute Paper Can Winder.

Depending on their size, up to 150 can bodies per minute are wound and labeled 5 at a time on this machine—with only one operator. A wide variety of sturdy round or irregular shaped can bodies 1¾" to 8" in diameter or across diagonals are produced in 3 to 6 plies.

Speed of production and adaptability to countless new attractive shapes and designs makes the Knowlton Automatic Convolute Winder the solution to the problems of rising costs and production slowdowns. An increasing number of packaging experts are using it.

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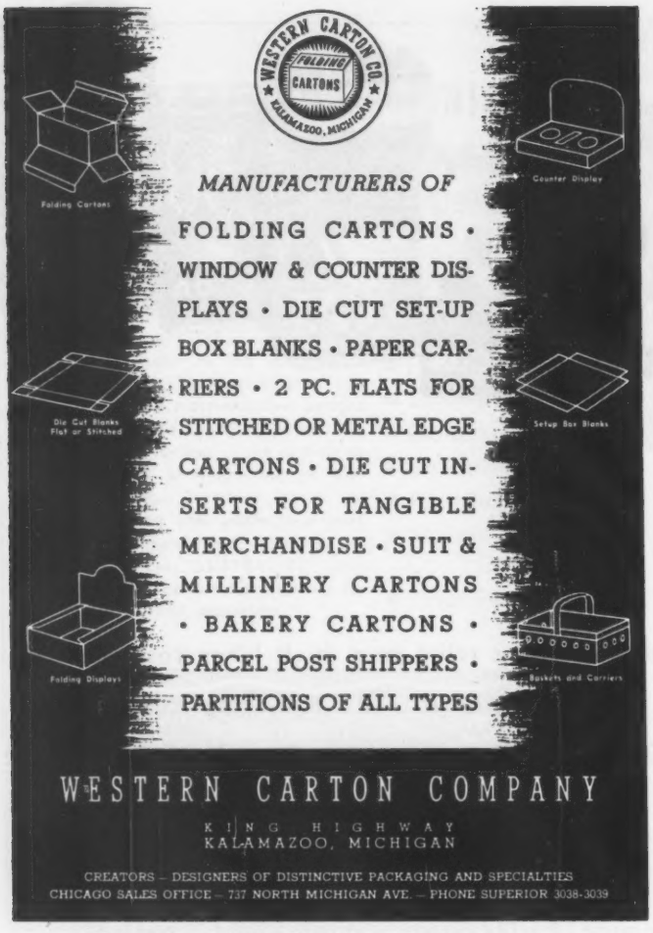
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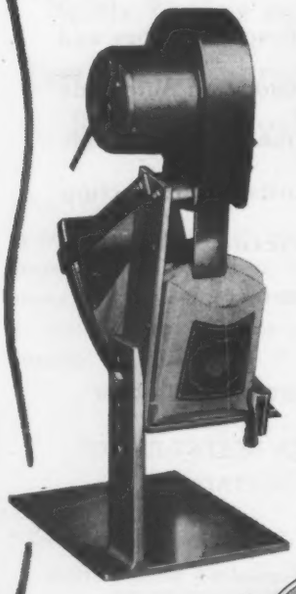
Anderson PORTABLE BAGGER



SPEEDY

EASY TO USE

LOW IN COST

Designed to handle bagged products with a minimum of effort at a maximum speed. Simple adjustments for height... tilting forward or backward enables operator to set machine at easiest position. Stainless steel trough with capacity of 200 bags. Adjustable to bag sizes. Blower keeps bag clean and free from foreign matter.

Write for Bulletin 10-29

ROCKFORD
Anderson
BROS. MFG. CO.
ILLINOIS

U.S. Patents Digest
(Continued)

seat formed about said passage, a flat valve hinged to lower edge to seat on sloping seat, upper end of plug being reduced and having its upper surface sloped to form an annular seat oppositely sloped.

Box-Wrapping System, J. S. Stokes (to Stokes & Smith Co., Philadelphia, Pa.). U. S. 2,425,210, Aug. 5. A sheet-transporting suction-conveyor comprising at least two endless porous belts of different lengths horizontally arranged side by side in close contiguity, a suction housing with a perforate top surface overtraveled by upper runs of the belts and through which suction is applied to the supported sheets, said housing having a main portion of a width equal to the combined width of belts and a narrower continuation beyond one end of main portion equal to longer belt and offset in respect to shorter belt, means adjacent other end of housing for engaging and driving all belts.

Compartmented Collapsible Fibreboard Container, H. S. Cann (to The Martin Bros. Box Co., Toledo, Ohio). U. S. 2,425,230, Aug. 5. A cubically chambered fibreboard container assembled from three initially separate selectively contoured and kerfed blanks having marginal edge portions, one of said blanks forming outer wall of bottom and sides of container and other blanks cooperating with first-named blank to form partition member, inner bottom wall and ends of container.

Method of Coating Paper and Composition Therefor, G. K. Dickerman and R. W. Riley (to Consolidated Water Power & Paper Co., Wisconsin Rapids, Wis.). U. S. 2,425,231, Aug. 5. The process of coating paper webs in a continuous paper-making process which comprises continuously spreading onto a rotating surface a controlled amount of a mobile, dense, thin, composition comprising an aqueous dispersion of a mineral pigment, a deflocculating agent for said pigment, from about 60 to 300 parts of enzyme modified starch adhesive based on 970 parts of bone dry mineral pigment and about 2 to 10 parts of ammonium stearate; transferring said composition in the form of a preformed film from rotating surface to surface of paper web passing forwardly at a linear speed of between 800 to 1,000 ft. per min. to provide web with a highly printable smooth surface.

Dispensing Device, A. Hammerstein, Palatine, Ill. U. S. 2,425,313, Aug. 12. A dispensing device comprising a sleeve adapted for connection with a receptacle and having an inwardly directed annular flange internally screw-threaded, a hollow member threaded into said sleeve and a passage provided with a valve seat at one end, an internally threaded bushing threaded into said hollow member, a tubular dispensing spout threaded into said bushing and provided with a valve seat at its inner end in spaced relation to first valve seat and a ball valve in hollow member movable between said valve seats to control ejection of contents.

Unloading Apparatus, G. L. Cherry and C. C. Veale (to Western Electric Co., Inc., New York, N. Y.). U. S. 2,425,362, Aug. 12. An unloading apparatus for a die-casting machine comprising a casting conveyor for receiving parts cast in the machine, means for moving said conveyor into position to receive parts, an ejecting device comprising a comb for engaging an article, a pantograph leverage mechanism operable to move said comb in one and then another plane to strip a part from the machine onto conveyor and actuating means for ejecting means.

Self-Sealing Fuel Tank, P. J. Dahser and R. A. Crawford (to B. F. Goodrich Co., New York, N. Y.). U. S. 2,425,514, Aug. 12. A self-sealing flexible tank comprising a lining of gasoline-impervious vulcanized synthetic rubber-like material, a rubbery sealing layer which will swell in gasoline but will not dissolve in gasoline and a tear-resistant outer skin, all adhered together.

Shipping and Display Box, G. J. Hofeldt and C. W. Lofgren (to Sanford Ink Co., a corporation of Illinois). U. S. 2,425,536, Aug. 12. A rectangular bottle package comprising a long carton-body member having an open end terminating in a plane inclined to two opposed walls thereof so that one is longer than the other, a cover telescoped over open end of body and a plurality of loose trays arranged one above the other parallel to said walls.

Receptacle Closure, A. L. Scott, Columbus, Ohio. U. S. 2,425,841, Aug. 19. A removable closure for outlets of fluid-containing receptacles comprising an interiorly hollow body composed of a resilient flexible pressure-deformable material, body including lower portion adapted for insertion in outlet of an associated receptacle and upper actuating portion adapted to be disposed exteriorly of said receptacle, hollow interior of said body defining a closed chamber, a compressible fluid occupying said chamber, upper actuating portion of body being responsive to externally applied, inwardly directed forces to assume a deformed condition, the volumetric capacity (*Continued on page 192*)

Look of the Month Club

Best sellers in the package parade are those labels and cartons that make the customers look—and buy . . . that serve as constant reminders, month-in and month-out.

Rossotti helps keep your product at the top of the buyer's list. For perfect purchase-appeal, mouthwatering eye-appeal, surefire display-appeal, Rossotti Labels and Cartons have few equals.

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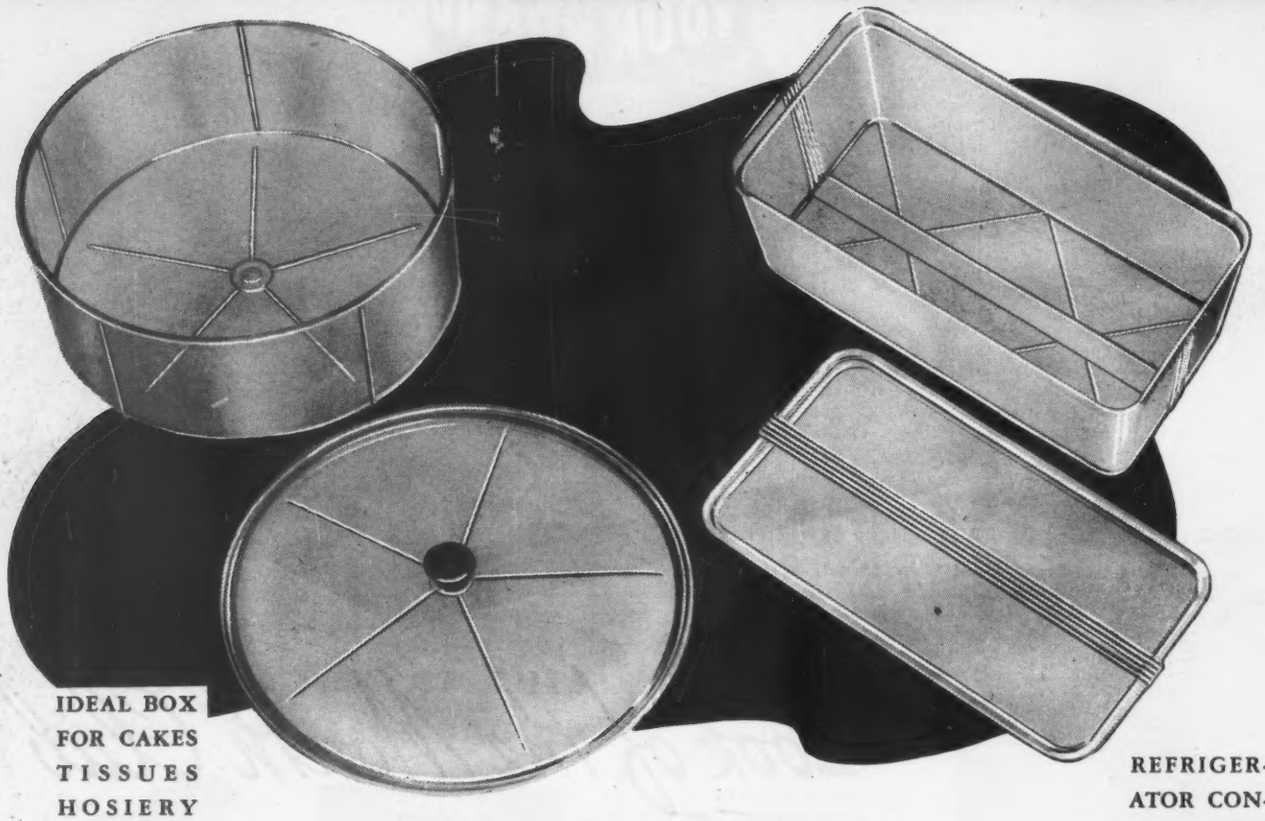
IT'S THE NEW *Refresher* PLASTIC BOX!

THE CRYSTAL-CLEAR *UNBREAKABLE PLASTIC BOX WITH A **100** AND **1** USES!



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BUTTER
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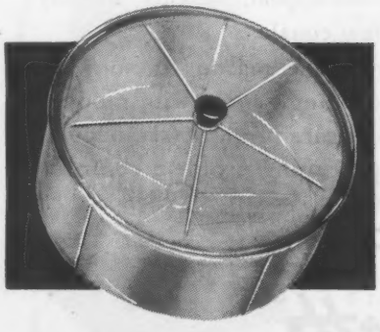
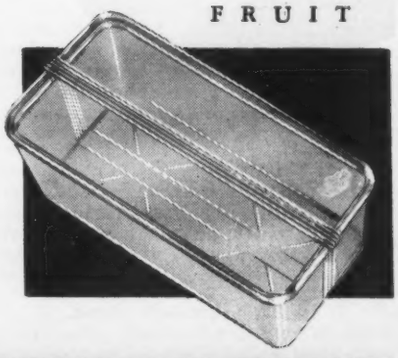
These unusually attractive lightweight boxes in lovely classic designs are "musts" for every home . . . they are ideal for picnics! Non-toxic and odorless . . . can be washed and sterilized in hot water.

The REFRESHER BOX is molded from the new #102 formula Polystyrene, developed in the laboratories of the Dow Chemical Company.

SMALL BOX: 7½" long, 3½" wide, 3" deep (Inside Measurements)

ROUND BOX: 8" diameter, 3" deep





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Fidelity of reproduction in your displays will insure their pulling power at the point of sale. They will talk directly to the consumer and get your message across . . . . with results. Full color lithography by Lutz & Sheinkman is designed to add sparkling emphasis to this fact.

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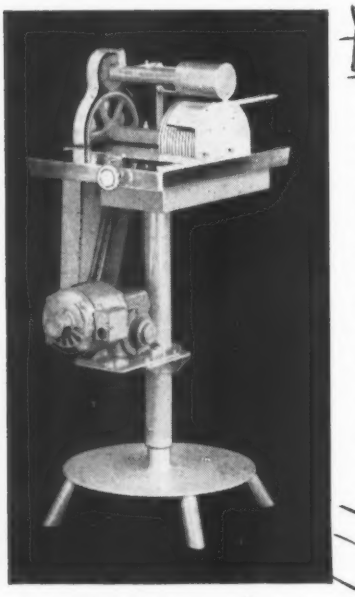
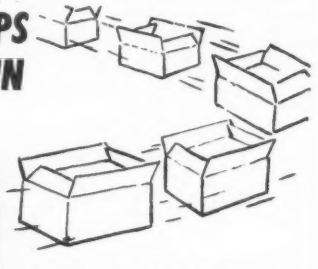
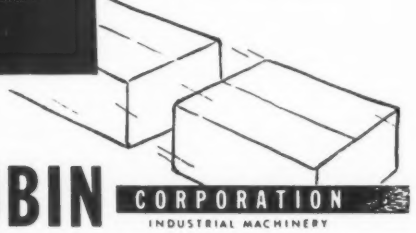
40-50 CARTON FLAPS UNIFORMLY GLUED IN 60 SECONDS—





THE NEW Dubin Hi-Speed Carton Flap Gluer applies an even smooth film of glue as fast as you can feed the machine. Gravity controlled platen roller automatically conforms to flap thickness up to ¼". Safe! Pressure of finger caught between rollers immediately disengages drive shaft gears and stops roller. All moving parts shielded by heavy bronze guards. Easily moved. Adjustable height. Quickly cleaned. Requires only 20" x 20" floor space.



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U.S. Patents Digest
(Continued)

(*Continued from page 188*) of the chamber increasing the pressure of fluid contained therein.

Sheet-Metal Container with Vent Opening, H. A. Fink (to Continental Can Co., Inc., New York, N. Y.). U. S. 2,425,609, Aug. 12. A container comprising a body portion, a metal-end closure seamed thereto, said end closure having opening in bottom of the depression adapted to be closed by solder tipping, a protective cap disposed beneath said opening, said cap including a bottom end and upstanding skirt, skirt being corrugated and shaped and dimensioned to make frictional-spaced lines of contact with inner surface of cylindrical wall of said depression and provide gas passage between contacting lines.

Sealable Carton for Frozen Foods, W. A. Ringer (to The Gardner-Richardson Co., Middletown, Ohio). U. S. 2,425,642, Aug. 12. In a sealable knocked-down box, a tubed sleeve of coated boxboard having articulated enclosing body walls, end closure elements for said sleeve having wall portions to extend across tubular sleeve and lateral flaps and an inner sleeve in telescoping relationship with first-mentioned tubed sleeve; in first-mentioned sleeve a recess is left into which a liquid sealing substance capable of bonding with the coating on body wall may be introduced to form a seal between closure element and first-mentioned sleeve and bridging across between body walls of first-mentioned sleeve.

Container, I. L. Wilcox (to Oswego Falls Corp., Fulton, N. Y.). U. S. 2,425,708, Aug. 12. A container formed of sheet material comprising a tubular body of rectangular cross section, an end closure formed at its periphery with an uninterrupted inverted channel enclosing end portions of body and sealed thereto.

Apparatus for Filling Containers with Weighed Quantity of Gaseous Fluid, G. C. Spaulding (to Industrial Management Corp., Los Angeles, Calif.). U. S. 2,425,844, Aug. 19. In apparatus for mixing fluids the combination of: a compressor, a tank connected to the intake side of said compressor, a tank connected to the outlet of said compressor, a tank on weigh scale connected to each of first-mentioned tanks, a plurality of feed tanks connected to weigh-scale tank, one of said feed tanks being connected to pressure tank, transfer tank connected to weigh-scale tank and valve means between all tanks.

Package Unit for Envelopes and Paper, E. G. Overly, Oakmont, Pa. U. S. 2,425,895, Aug. 19. The combination with a stationary box adapted to hold two packs of envelopes side by side of an insert for said box folded from a single sheet to form an intermediate pack separating section defining upstanding walls, said insert having two substantially horizontal bottom sections on which the two packs on opposite sides of said upstanding walls are adapted to be supported, respectively, and two band sections adapted to extend over a corresponding pack.

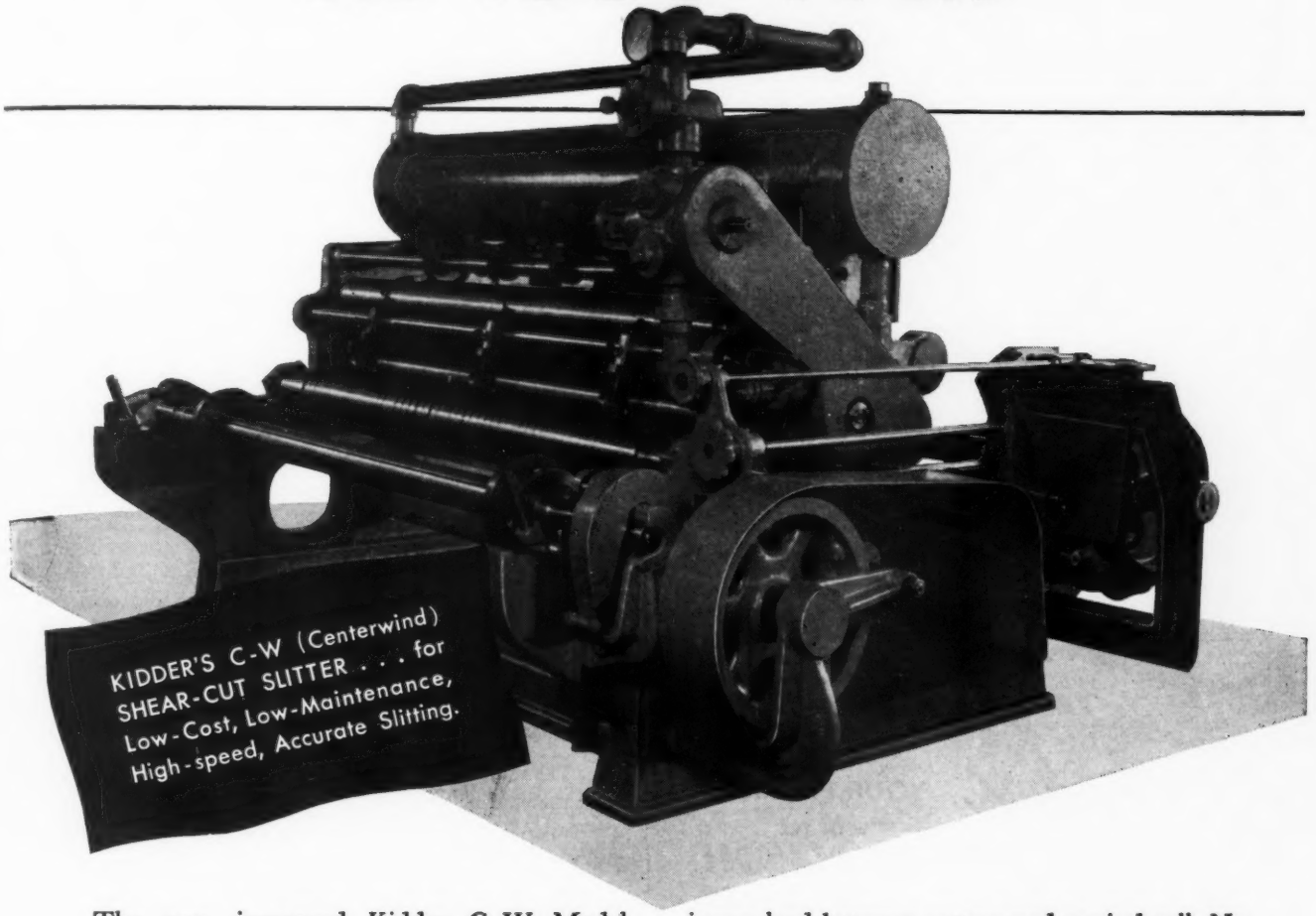
Plastic Sheet Material and Method, C. A. Scogland (The Studebaker Corp., South Bend, Ind.). U. S. 2,426,058, Aug. 19. As an article of manufacture, a ribbed and laminated plastic sheet material comprising outer layers of plastic-impregnated sheet material, an intermediate layer of plastic-impregnated sheet material positioned between said outer layers and having slits therein and deformable cores threaded through slits in intermediate layer.

Manufacture of Collapsible Tubes, F. W. Seybold (to American Type Founders, Inc., Elizabeth, N. J.). U. S. 2,426,060, Aug. 19. The method which comprises forming a tubular blank having an intermediate portion of greater thickness than the end portions supporting ends of the blank, rotating one end of the blank with respect to the other while moving the ends toward each other to crimp and shape intermediate portion of the blank to form necks and shoulders of a pair of tubes.

Bottle Cap and Remover Therefor, G. H. Hutaff, Jr., Wilmington, N. C. U. S. 2,426,101, Aug. 19. The combination with a sheet-metal cap having a top portion adapted to overlie the beaded upper end of a bottle and a depending flange adapted to be crimped about same with an interposed seal therebetween, said cap having a centrally disposed seat portion depending below the plane of top portion, a metal pull member anchored at one end with reference to cap and having a releasing tab at its opposite end adapted to engage with seat in cap and depending portion of pull member to impositively interlock them.

Cap for Glass Bottles, G. H. Hutaff, Jr., Wilmington, N. C. U. S. 2,426,102, Aug. 19. A bottle cap having a flange adapted to be crimped around the beaded mouth of a bottle, cap having a depressed circular groove therein providing opposite confining walls located inwardly of outer edge of cap, adapted to constitute a seat for a pull ring engaged to remove cap from bottle.

Processed Stock Rolls Hum Off AT 1500 FPM



The new, improved Kidder C-W Model Slitter delivers accurately-cut, dustfree rolls of processed stock in widths 2″ or more at 1500 fpm. Rolls are never burred or interwoven . . . they fall apart by themselves. The centerwind principle, without rewind drums, allows slitting of most types of papers from light tissues to heavy-coated tag stocks.

Automatic Carriage — a Kidder exclusive — in which the carriage moves backward as the rewind roll grows bigger, assures constant, minimum lead between cutters and rewind roll. No chance for interweaving rolls.

Automatic Hydraulic Tension Control — prevents interweaving. Kidder engineers have applied this principle to the C-W model to assure constant web tension. Simply set the desired tension on the dial and it is automatically maintained throughout the run.

Scissors-Action — Shear-type cutters, self-sharpening for low maintenance, *cut* the *web* cleanly.

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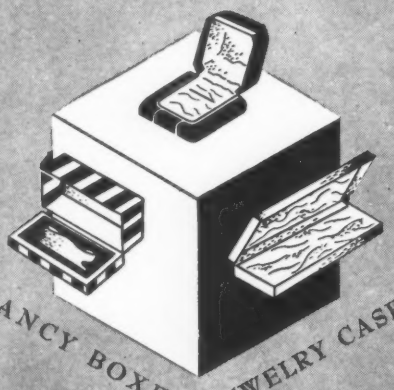

FANCY BOXES ★ JEWELRY CASES

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Personalize YOUR PACKAGE WITH THE "PACER" MODEL HEAT-SEALER

EMBOSSES TRADE-MARK OR NAME RIGHT IN THE SEAL

Lend prestige to your package . . . individualize your product! No extra time . . . no extra labor . . . no extra material required. Name or trade mark can be embossed while bag is heat sealed in one simple operation! One of many exclusive features available with Heat Seal-It Equipment.

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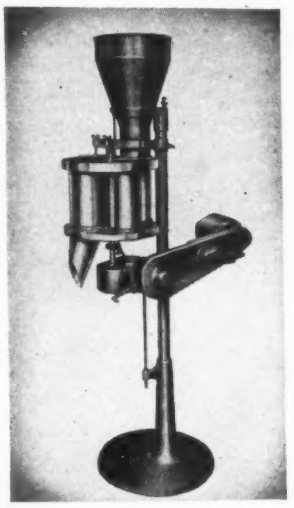
Equipment and materials

(*Continued from page 164*) commodity plate 8 by 10 by 14 in., is equipped with a time-saving device known as the air-controlled dashpot, which minimizes the fall of the scale lever when a package is placed on the commodity plate. Another feature is the extra-high pillar which towers the over-and-under head well over the height of the commodity plate, thus enabling the operator to read the weight indicator at a glance, no matter how high the packages are.

VERSATILE FILLING MACHINES

Stuyvesant Engineering Co., Lyndhurst, N. J., announces a line of three versatile filling machines with a speed of 15 to 120 containers per minute. With interchangeable parts, any one of these three models, the makers claim, can handle frozen foods, such as peas, beans and corn, as well as free- or slow-flowing materials like popcorn, cereals, crystals, spices, noodles powders and nut meats. The Model 204 is engineered to handle free- or slow-flowing products with a range of 8 oz. to 5 lbs. in one discharge, depending upon the product, but can be easily and quickly changed over to Model 205 or Model 206 to fill containers of smaller capacity. The usual range of Model 205 is 3 oz. to 3 lbs., while the Model 206 is from a fraction of a gram to 6 oz. These machines, it is reported, fill any type of container with unusual net-weight accuracy, are inexpensive, noiseless and safe. The variable speed drive permits the exact maximum speed of which the operator is capable.



ALL-ALUMINUM CONVEYOR

The Market Forge Co., Everett, Mass., has now added to its line of materials-handling equipment an all-aluminum conveyor known as the "Standardized Load-Veyor." With the exception of the wheels that retain the hardened inner race ways, the hardened steel balls and the hardened outer race ways, all parts are of aluminum. The design is exactly like that of their all-steel Load-Veyor which has been on the market for several years. The new conveyor weighs only 30 lbs. for a 10-ft. length as compared with the all-steel conveyor which weighs 58 lbs. for a 10-ft. length, yet provides equal strength it is said.

NEW PALLET UNITS

After two years of testing, the Elizabeth Iron Works, Elizabeth, N. J., is now offering its Multi-Stak pallet-stacker unit which has been specially designed for the handling of crushable or varying sizes of merchandise. When in use, supporting standards lock in an upright position to hold the pallets, placed one above the other; thus no weight is placed on the merchandise itself.

Palmer-Shile Co., Detroit, announces the availability of a new, all-metal, single-face pallet rack and nesting ring for use with a power or hand truck. This pallet rack is especially designed for heavy industrial use.

to the Packaging Machine Maker

A good carton can no more be made out of inferior boxboard than a purse can be made out of a sow's ear...however fine the machine in the one case or the needle in the other. The best your packaging machines have in them is brought out by Ridgelo Clay Coated boxboard. It is rigid enough for easy tucks and strong side walls. It is flexible enough for quick forming and gluing. And it has the uniform character essential to fast, uninterrupted production. That's why Ridgelo Clay Coated board, custom-made and finest in its field, will always back up your recommendation.

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CLAY COATED
BOXBOARDS

*custom-made FOR THE INDIVIDUAL PROCESS, INKS, DESIGNS, COLORS AND FINISH.

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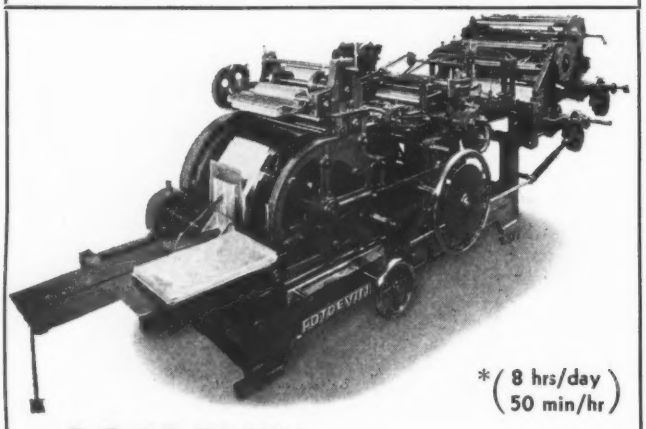
CELLOPHANE BAGS
PER DAY*



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BAG MACHINES

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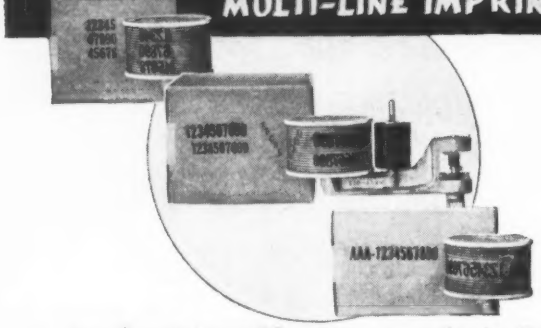

. . . for Container Marking and Code-Dating

- Automatic package marking with legends containing up to *five lines of type* now is possible with the newest ROLACODER models. Attached to a conveyor, packager or sealer, ROLACODER imprints at almost any spot on top or side of cartons, crates, kegs, drums, etc., without interrupting their movement.
- Interchangeable rubber type feature permits quick changing of imprint legends . . . use of variety of type sizes and styles . . . use of legends containing one to five lines of copy.
- ROLACODER is friction-operated . . . requires no labor, extra time nor outside power. Easily installed without altering present equipment.

Write for descriptive literature . . . and state exact nature of your marking needs.

ADOLPH GOTTSCHO, INC. MARKING EQUIPMENT

183 Duane St., New York 13, N. Y.

See our catalog in 1948 Sweet's File for Process Industries

Polyamides

(*Continued from page 148*) the resin is fundamentally incompatible with waxes and melts only after the wax on the paper has been liquified. This liquid wax is physically displaced by the pressure of the unmelted or partially melted resin.

The polyamide resins which are used for heat sealing are those which are made from the dimerized and trimerized linoleic and linolenic acids of soybean oil, subsequently reacted with ethylene diamine. These resins are truly thermoplastic resins possessing great stability in the molten condition. Their molecular size is intermediate between two extremes. The molecular weight is low enough to maintain constant fluidity without advancement of the molten resin, yet it is high enough in molecular weight so that it has sufficient cohesion to maintain a strong bond between the sheet materials, thus causing a rupture of the sheet material rather than the adhesive. By controlling processing procedures so that predominantly linear polymers are formed with a minimum of cross linkages, General Mills' Polyamide Resin No. 94 (the hot-melt-uncompounded grade) possesses a maximum of heat stability in the molten condition without skinning over or gelling. During an extended period in the molten condition, freedom from flammability, serious darkening or other decomposition is noteworthy. The solvent type, No. 93, may also be used as a hot melt with less time of stability in the molten condition but with stronger sealing qualities due to the higher viscosity and molecular weight of the product. These grades may be blended together or with other different materials to achieve the results which may be desired.

The final coating is resistant to water, strong alkalies, mild acids, oils and greases, gasoline and to aliphatic hydrocarbons generally. It is much more resistant to ignition than are most alkyd resins and other commonly used organic surface coatings. With polyamide coatings, heat sealing may be accomplished many degrees below the temperature commonly used for this purpose, thus preventing excessive weakening of the sheet material due to high temperature. The seal resulting from polyamide-resin coating is a tough "resinous" seal, rather than a weak "waxy" seal. In spite of the advantage of low temperature of application and of sealing, the compositions are remarkably free from blocking troubles.

The over-heating of the resin coating is extremely undesirable because it may accomplish the opposite result from that desired. Over-heating at 300 deg. F. produces an extremely low viscosity and causes the resin to soak into the paper instead of standing out on the surface as a glossy smooth coating. Over-heating also makes the resin seem like a penetrating oil in appearance, in consistency and in having no adhesion at all until it has once more cooled down. Over-heating does no permanent harm, but may cause considerable surprise and annoyance. It is possible to run the paper or sheet material through the sealing machine at a

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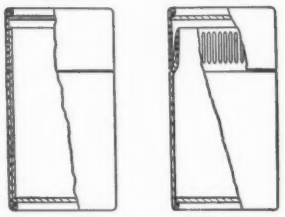

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faster speed so that the adhesive becomes warmed up only to the proper degree, instead of lowering the setting on the thermostat of the sealer and running at the slow speed.

Other advantages for packaging

In a practical sense, polyamide resins have an attractive combination of properties which makes them very interesting for meeting and dealing with packaging problems. Their merit does not depend entirely upon hot-melt and heat-sealing adaptability, although in these they are excellent. While polyamide does not approach paraffin wax on a flat unfolded sheet as a water-vapor barrier, it is just about as good as the paraffin-coated paper—in fact almost equal to it—once the sheet is folded. For most package operations, a fold is almost unavoidable.

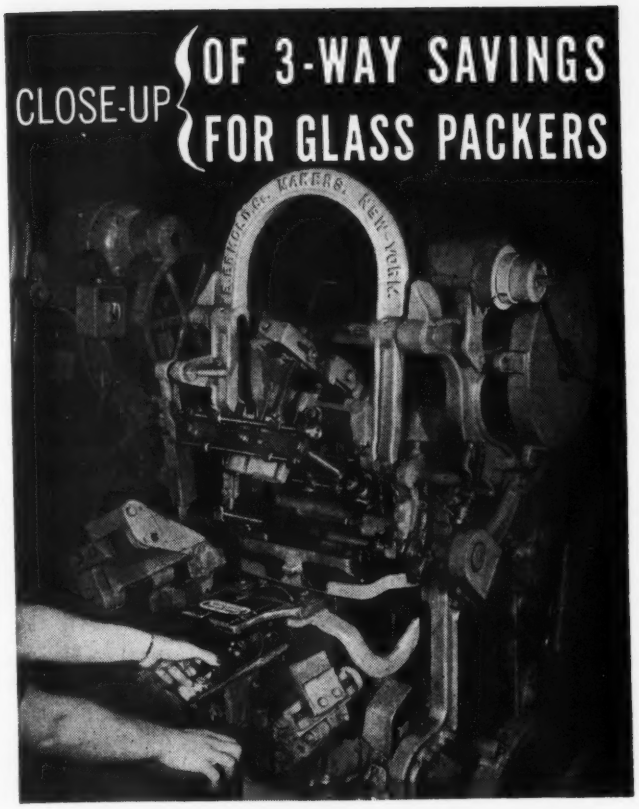
When one checks one material against another for some specific property, he finds that polyamide resins do not have any really outstanding weaknesses which usually accompany the strong points of almost every material.

Taking once again the example of paraffin wax, which is outstanding in water resistance, polyamide coatings though not equal are not bad in this respect, yet do not suffer from the accompanying weaknesses of being soluble in grease, gasoline and hydrocarbons or of being easy to set on fire.

The use of polyamide instead of nitrocellulose in heat-sealing compositions eliminates the fire and explosion hazards in plants and the porosity of the resulting film. If the formulator thinks it is necessary to use nitrocellulose, polyamide resins offer an attractive combination of properties for overcoming the objections of nitrocellulose. There is just enough flame resistance to polyamide resin to make it attractive for nitrocellulose lacquer. Its adhesiveness and moisture-vapor-barrier properties may also reinforce nitrocellulose.

Metal foils have excellent barrier properties, but require a coating for sealing or for ornamental purposes. Metal foils offer an excellent opportunity for polyamides as the heat-sealing coat, for laminating, or as adhesive and resistant printing inks. Beautiful colored transparent inks and coatings can be made with polyamides which have been colored by oil-soluble dyes. Transparent colored adhesive inks for foils may be formulated which can be embossed and stand a great deal of flexing without the coating peeling off the foils. Colored transparent coatings may also be applied over printing and produce novel and attractive results on foil, particularly on foil labels.

Success in formulating and applying coatings of polyamide resins lies in the ability to choose and blend the proper materials, such as plasticizers, tackifying resins, anti-oxidants, solvents, waxes and the like, to achieve special results for special conditions and for each machine with its particular idiosyncracies. Compatibility of various resins with uncompounded polyamide resin is indicated in Table II; a more complete chart is available on request.



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Packaging problems vary from food to food; there can be no stock solution. Betner is expert at finding an answer tailored to the specific food under study.
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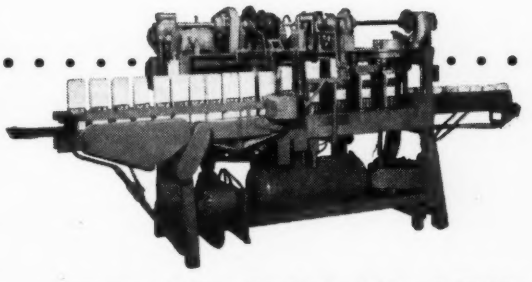

Shown here, the Benco Bag-Closing (glue-seal) Machine, as used in packaging Continental Coffee and many other coffee brands. The popular Benco provides product-protection from roaster to consumer—plus low cost of initial package, low labor and shipping cost, and high display value. For full protection, from processing to pantry shelf—see Benj. C. Betner Co, Devon, Pa.

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Produce wastage

(*Continued from page 124*) and spoilage loss rate in the bulk stores without refrigeration was 6.5%.

Other factors which could not be controlled under normal conditions also affected waste and spoilage. Among these are personnel and the type of customers who patronize the store. Another variable that could not be controlled entirely was the general average quality of the merchandise handled. It appeared that quality of produce delivered to the two refrigerated stores was in some instances higher than the average quality of merchandise delivered to the conventional type non-refrigerated stores. This is indicated by the fact that the concealed loss rate was only 0.4% in the refrigerated stores, compared with around 1% in the bulk stores. Because of these uncontrolled variables, it is not possible to claim that the differences in waste and spoilage in these two types of stores was entirely due to refrigeration. However, this difference is a rough indication or relative measure of the value of refrigeration. Moreover, there was substantial evidence that the use of refrigerated cases reduced the spoilage loss on many individual commodities.

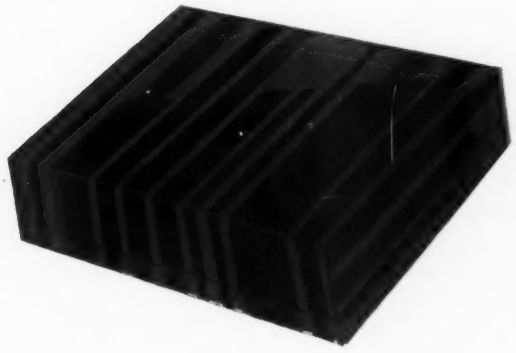
The value of refrigeration also is indicated by comparing the weekly average loss rates in refrigerated stores with these in non-refrigerated stores. The weekly average loss rates in the two stores equipped with refrigerated cases was 2.2, 5.6, 2 and 2.1% for the weeks ending April 13 and June 15, 1946, and Feb. 1 and Feb. 8, 1947. Weekly loss rates observed in non-refrigerated stores were 6.3 and 7.1% in two conventional-type non-refrigerated stores for the week ending Jan. 19; 3.3 and 5.2% for the week ending Feb. 16; 7.9 and 8.1% for the week ending May 18 and 7.7 and 9.6% for the weeks ending June 22 and June 29, 1946.

Spoilage losses in refrigerated stores in excess of 5% were found for lima beans, eggplant, pineapples, parsnips, kale, sweet corn, asparagus, peaches, avocados, tangerines, rutabagas, beets, radishes, peppers, pears and spinach. Some of these commodities were displayed in refrigerated cases and others such as rutabagas were displayed in a non-refrigerated section of the produce stand. Generally the more perishable vegetables were displayed in the refrigerated cases. Fruits and hardware vegetables ordinarily were not refrigerated.

Therefore, a much better indication of the value of refrigeration can be obtained by comparing the average spoilage losses only on perishable vegetables in refrigerated stores, with losses on similar vegetables in non-refrigerated stores. This was done for the first two quarters.

The average loss rate on perishable vegetables in the refrigerated stores during this period was 3.5%, less than half the average 7.6% for non-refrigerated perishable vegetables. The concealed loss was 5% in the refrigerated stores, 1.3% in the non-refrigerated. The mark-down loss rate was 1.8% in both groups of stores. The difference in garbage loss was greatest. For re-

When shoppers become buyers



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frigerated stores, it was 1.2 compared with 4.5% for non-refrigerated stores.

Among the most important perishable vegetables, the loss rate in the refrigerated items was in nearly every instance significantly lower than in the non-refrigerated items. The average loss rate on lima beans was considerably less in the refrigerated items, although it was still rather high in relation to other items. The average spoilage rate on eggplant, kale, sweet corn, beets, radishes, peppers, celery, rhubarb, summer squash, green beans, lettuce, cauliflower, prepared vegetables, cucumbers, tomatoes, cabbage and green peas was definitely lower in stores equipped with refrigerated cases. Savings in waste due largely to refrigeration were most apparent in the large-volume items such as tomatoes, lettuce, green beans and celery.

In a few cases, particularly asparagus and spinach, the spoilage rate averaged greater in the refrigerated stores than in the non-refrigerated stores. The reason for these exceptions is not known. They may have been due to differences in quality of the merchandise or to other factors.

From the retailer's standpoint it is more important to reduce his waste and spoilage cost by a small percentage in the high-volume items than it is to get a relatively greater percentage reduction in the less important items.

Savings possible

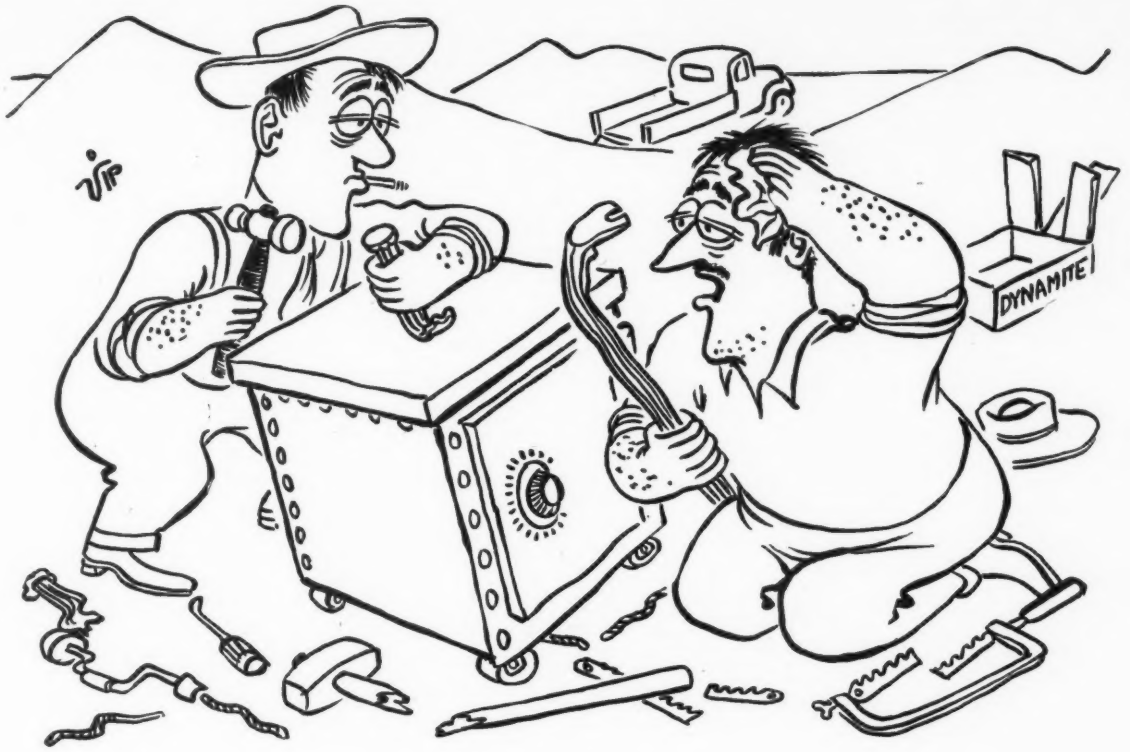
The refrigerated stores in which this survey was made used two cases each. The initial cost of each case was around $1,000. The cost of amortization is usually written off during the first five years. Assuming the weekly volume of business in perishable vegetables to be approximately $500, the cost of depreciation of the two refrigerated cases would be 1.5% of the retail value of the vegetables refrigerated. Estimates on the cost of maintenance of the cases run as low as 0.25% of the retail value of produce retailed from the cases. This indicates that the initial cost of the equipment and operation cost would be around 1.5 to 2%.

It would seem logical, therefore, that savings in waste and spoilage on produce retailed from these cases should exceed 1.5 to 2% if refrigeration is to be justified. Savings above 2% should permit a lower cost of distribution. Data obtained in this survey indicate that the savings in waste and spoilage losses through use of refrigerated cases reached about 3%. When the average life of a refrigerated case exceeds five years, the average rate of amortization would be somewhat less.

Although the use of mechanical refrigeration in the retailing of fresh fruits and vegetables shows considerable promise, improvements in design and appearance are desired. Some of them probably will be made fairly soon. These should offer greater utilization of the refrigerant and provide a more desirable degree of slope of the rack, thus permitting a more attractive arrangement of displays of produce.

This report has shown in detail the extent of waste

Swift Glues—all kinds for all uses



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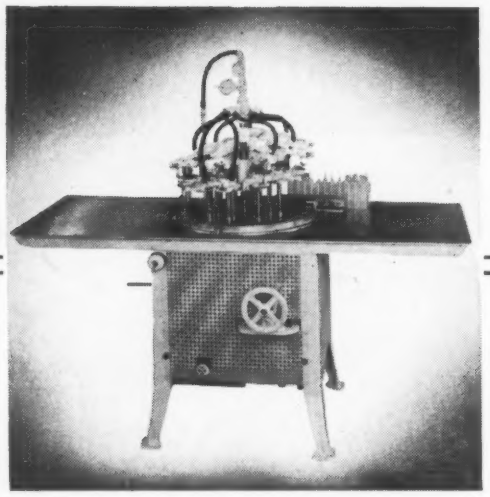

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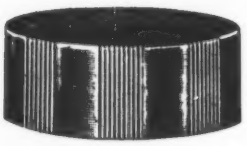

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and spoilage costs in retailing fresh fruits and vegetables as found in a sample survey and has shown means of reducing these losses. Unquestionably the average waste and spoilage in marketing fresh fruits and vegetables could be materially reduced through the full utilization of the procedures described.

As a general rule, however, these methods have been used more or less for many years. A method that is relatively new in the field of merchandising fresh fruits and vegetables is pre-packaging. Advocates of pre-packaging believe that it will materially reduce waste and spoilage losses and improve the over-all efficiency of merchandising these commodities. The U. S. Dept. of Agriculture in cooperation with the American Stores Co. is now attempting to ascertain by experimental research to what extent waste and spoilage losses can be reduced, as well as other economic benefits which may be realized by pre-packaging.

Wayne U. Institute

Aimed primarily at executives responsible for or actively engaged in the work of packaging and material handling, a one-week Institute was conducted by the Wayne University School of Business Administration, Detroit, in cooperation with the Industrial Packaging Engineers Assn. of America, Sept. 29 to Oct. 3.

Among the speakers were many well-known figures in the packaging profession, including J. G. Witte, Montgomery Ward & Co.; W. B. Keefe, Westinghouse Electric Co.; M. A. Grogel, Butler Bros.; Paul Barcus, Owens-Illinois Container Laboratory, and A. V. Grundy, Quartermaster Food & Container Institute.

R. F. Weber, International Harvester Co.; Ralph Clark, Cadillac Div., General Motors Corp., and Glen R. Johnson, Clark Equipment Co., lectured on materials handling.

A field trip covering many of Detroit's most prominent industrial operations was sponsored by the Transportation Div. of the Detroit Board of Commerce. Edward Dahill, chief engineer, AAR Freight Loading & Container Section, and T. W. O'Neill, American Trucking Assn., were among the speakers on transportation.

"Minute men," so called because of their five- to 10-minute presentations, came direct from industry to demonstrate particular problems in packaging and materials handling. Among the companies and institutions furnishing "minute men" were International Harvester, Ford, Chrysler, General Motors, General Foods, Wirebound Box Assn., National Wooden Box Assn., the Folding Paper Box Assn. and Associated Cooperage Industries.

The Institute, designed more or less as a "post-graduate" refresher course for executives with packaging and materials handling responsibilities, had no direct connection with the regular two-semester undergraduate courses conducted at Wayne's School of Business Administration under Dr. Spencer A. Larsen.

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KODAPAK makes shopping a pleasure—for merchants.

That's because shapely display cases made of this tough, optically clear material show off your product's beauty to sparkling advantage ... make shopping selection easier and faster ... yet always protect the product from dust, dirt, and fingering.

Kodapak sheet is made in two forms:
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Current supplies of Kodapak are somewhat limited, due to continually increasing demand. But the Kodapak Demonstration Laboratory in Rochester is available to demonstrate fabrication possibilities and practical end uses.

For the display you *want*
... the protection you *need*...

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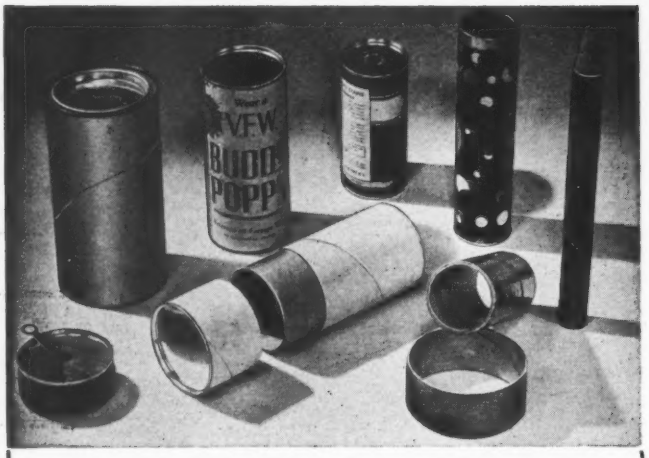

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PACKARD offers spiral-wound round tubes and containers in all conceivable lengths and diameters—drum-shape, long, thin, flat. Sturdy and light-weight, PACKARD containers are perfect for any dry commodity—foods, drugs, chemicals, cosmetics, toys, novelties, insecticides, electrical products, shipping, textiles.

And these low-cost containers are available *immediately!* Whether you choose metal-end or paper-cap, plain or labelled—watch your product go in a PACKARD package.

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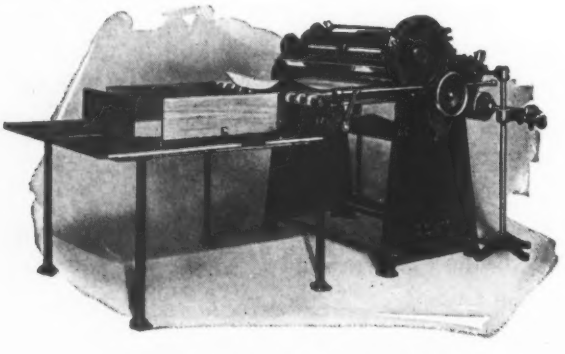
have been sold to lick the "cost thief" in cutting into sheets all kinds of transparent papers and other packaging materials. Particularly are the "ELECTRONIC-EYE" solving the sheeting problems of your competitors. Their unfailing performance for accuracy and high productions might also be the answer to your searching for profit producing equipment. May we answer your questions —NOW?



CHARLES BECK MACHINE CO.
13th & Callowhill Streets Philadelphia, Pa.

More gift ideas

(*Continued from page 96*) the Dutch crock with handle, which has been adopted by Hanscom Baking Corp. (Fig. 19). The crocks, which are attractively boxed, make it easy for the consumer to heat the pudding right in the container. When the pudding is gone, the crock becomes a useful baking dish for small casserole or other oven dishes. Hanscom has also dressed up a miniature wirebound wood box with colorful labels to make a gift package that is called "treasure chest."

Cosmetics

In our last issue (MODERN PACKAGING, Sept., 1947, p. 93) we presented a preview of fall cosmetic packaging, but since that time so many new gift packages have appeared that further mention must be given to many of these outstanding new packaging ideas.

Interesting packages that make a play for mass markets are gift sets for men put out by F. W. Fitch Co. of Des Moines, Ia., and the new display gift-carton for Bathasweet Miniatures.

The two Fitch packages, retailing at 59 cents and $1.08, mark off the 10th year of special gift packaging for these staple toiletries (Fig. 23). The two packages, according to the company, are aimed to attract the $2,000- to $3,000-a-year income group. The $1.08 set called "Kit for a King" is inspired by a pun on a familiar adage and thus takes as its design theme in full color, the regal motif of a contemporary man sitting on a throne with a background of reddish brown. The container is a set-up box with platform die cut to hold shampoo, hair tonic, skin lotion and shave cream. Two wild ducks in flight decorate the cover of the 59-cent package which contains shampoo, hair tonic and skin pep. The title, "A man's gift set by Fitch," immediately identifies the package as men's toiletries.

The Bathasweet package is as attractive a gift box when closed as open. It is tastefully conceived in pastel colors with floral motif and green background (Fig. 24). Its die-cut lid that folds back for display is an excellent aid to the dealer for showing on the counter the products inside—powder, cologne, water softener, soap, etc.

Biggest surprise of the season in view of the uncertain conditions in the cosmetic trade is the tremendous emphasis placed on kits of various types and gift-set packaging. Revlon's gift catalog includes descriptions of 18 kits for manicure preparations, cuticle cutlery, lipsticks and lipsticks combined with nail preparations, ranging in price from a dollar to $18.50.

The House of Gourielli lists 10 gift-set packages, six for women and four for men, several put up in the metal and wicker baskets which have won such wide success for Gourielli products in other years. Original as they are decorative, too, in the Gourielli line are the clear glass cocktail-shaker containers for the firm's Five O'Clock fragrance series (Fig. 21). The con-

Kodak
T. M. Kodapak Reg. U. S. Pat. Off.

Alflex #500

PERFECT
RUNNING MATES
IN
CONVEYOR CHAINS!

Alflex #400

both are available only on

ALVEYORS*

the word for every conveyor need

BOTH have a degree of flexibility that readily adapts them to the varied kinds of chain conveyor uses. Without transferring packages they convey on the straightaway, up or down and around curves! Both have universal joints which permits the use of anti-friction guide wheels on curves. Both are designed so that they may be assembled without use of special tools! Both are used in carrousel or return strand types. Chain conveyors are especially adaptable for cartons, cases, cans, and containers.

FOR EXTRA SMOOTH ACTION...ALFLEX #500

Larger wearing surface on top and bottom of links. Larger bearing areas between pins and links provide wider plane surface for riding packages. This results in smoother action!

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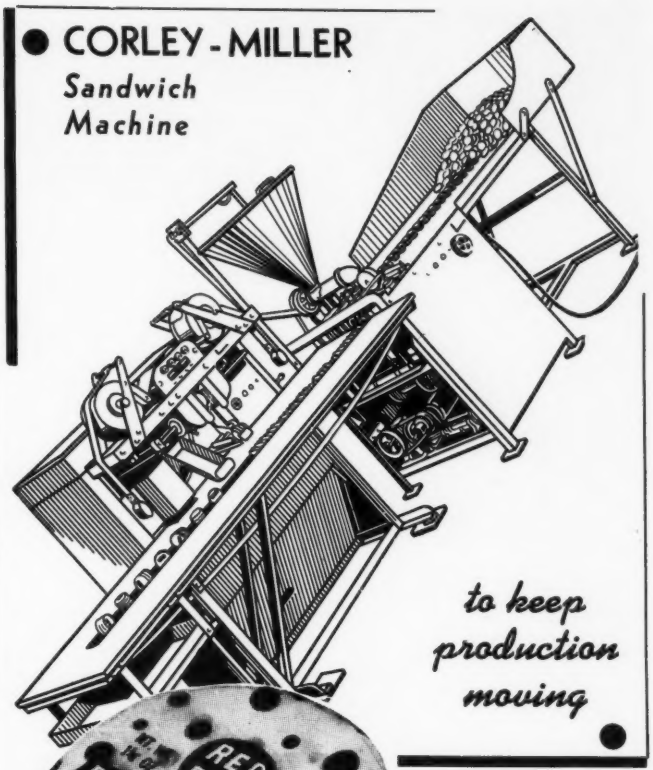
ALVEY CONVEYOR MANUFACTURING CO.
3205 SOUTH BROADWAY ST. LOUIS 18, MO.

● CORLEY - MILLER
Sandwich Machine



to keep production moving

CRACKER—COOKIE
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PEANUT BUTTER or SWEET FILLING

are made and wrapped at a 100 per minute clip on this combination of the Corley-Keller Sandwich Maker* and Corley Automatic Wrapper* . . . Slashes labor and material costs — only two operations needed . . . Cuts cracker breakage, reduces package weight variation to a minimum by applying butter uniformly at proper consistency . . . Saves up to 20% in Cellophane . . . Electric Eye available for printed wrappers . . . One of the many precision-built, efficient packaging machines and combinations in the Corley-Miller line . . . What are YOUR needs? . . . Write today!

(Can be had separately)

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- ☐ Bag-Making
- ☐ Bag or Carton Filling
- ☐ Bag Sealing
- ☐ Sheeting-Gluing
- ☐ Heat Sealing (Hot Plates & Hand Irons)
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Miller Wrapping & Sealing Machine Co.

Manufacturers of CORLEY and CORLEY-MILLER PACKAGING MACHINES
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DIE CUTTING
EMBOSSING
Steel Rule DIES
for
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that comes with more than 20 years' experience.
THE SERVICE
that is rendered only by a firm that devotes its efforts to satisfying its accounts.
THE SPECIALTIES
that make their name a byword in the die cutting field.
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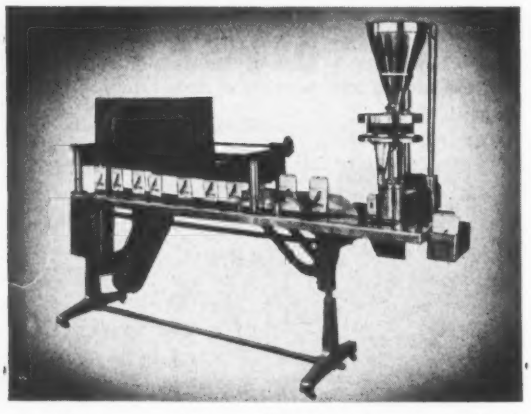
192½ GREENE ST., NEW YORK 12

KINKS IN YOUR PACKAGING LINE?

Our job is to supply standard equipment to do standard packaging jobs like wrapping, sealing, conveying and filling.

We also design and engineer efficient packaging systems and design and build special machinery for special packaging needs.

If you need *any* kind of help in setting up or modifying a packaging operation, we'd like to consult with you.



This compact filling and sealing set-up for coffee bags is low in cost, easy to operate. Speeds of 35 to 40 bags per minute with one unskilled operator.

WRAP-ADE MACHINE CO.
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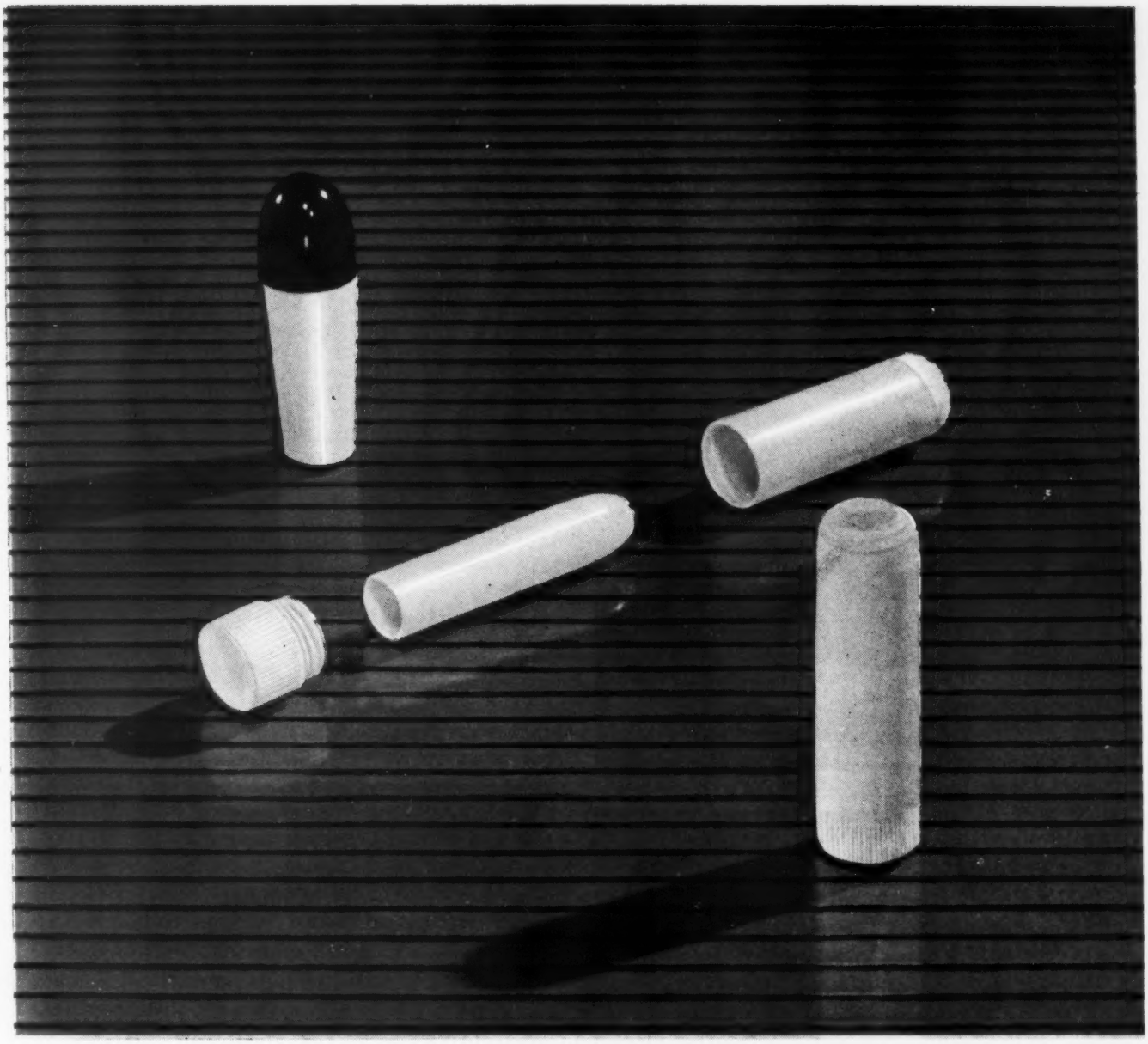
Phone : NEvins 8-8052

tainers are topped with special gold cocktail-shaker tops which add to the realistic effect. Another striking item in the line is the Victorian glass paper-weight package of clear glass, heart shaped with raised central dome surrounded by a Victorian scroll (Fig. 22). One dram of Five O'Clock perfume in the characteristic cocktail-shaker bottle can be removed and replaced later by a favorite photograph. Fabulous packages, too, are Gourielli's lipsticks jeweled with simulated emeralds, sapphires, rubies, topaz, aquamarines, etc.

Elizabeth Arden's gift collection places strong accent on the surprise element with a dozen or more specially prepared novelty packages designed for the whimsical appeal of sparkling snow men with bead eyes (Fig. 27) and red satin Santa Clauses concealing drams of Arden perfumes. There is luxury appeal, too, of transparent boxes, metallic printed papers, gold lace and glistening tree ornaments. Blue Grass toilet water in a private mold bottle is enclosed in a pink cylinder fastened with a blue plastic horse (Fig. 25). Three cakes of soap wrapped in Blue Grass blue tissues show under a clear acetate-lidded box trimmed with gold paper lace, topped with tiny Christmas-tree ornaments. Similar treatment of an oval transparent box is given to a set of Blue Grass dusting powder and Flower Mist cologne (Fig. 26). Christmas bells and balls are given new treatment by suspending the bells in a tiny foil-covered belfry or hanging the balls or bells in acetate boxes, both cylindrical and square. One lavish ensemble is a bottle of Blue Grass perfume, lipstick pencil and tube of bath wafers, hidden in a sparkling jewel-cloth Victorian boot with sequin buttons and trim, housed in a transparent-acetate box tied with cyclamen ribbon. A $15 re-use dressing-table package contains a box of Blue Grass face powder wrapped in pink rayon satin and placed in an acrylic case, trimmed with gold-colored paper lace, that opens to reveal lip pencil, eye shadow and cream rouge resting in recesses of the plastic base (Fig. 28).

Last but not least are several new ideas this year in displaying Christmas merchandise. A particularly effective one is the paperboard Christmas tree devised by Shulton for counter selling of its $1 Christmas-bell packages of Early American Old Spice perfume. Thirty-six bells hang on the tree. Bells are of die-cut, foil-laminated board with perfume carded to the board and overwrapped with cellophane. A cord attached through holes in the board provides the means of attaching the bells to the tree (Fig. 17).

CREDITS: **Glenmore**—*Lantern, Consolidated Lithographing Corp., Brooklyn. Candle, Milprint, Inc., Milwaukee, Wis. Decanter—glass containers, Owens-Illinois Glass Co., Toledo, Ohio; front label, Consolidated Lithographing Corp., Brooklyn; back label, Commercial Lithographing, Louisville, Ky. Jug, Western Stoneware Co., Monmouth, Ill.; jug carton, Container Corp. of America, Chicago.* **Philip Morris** *box—designer, Robert Fondiller, New York; polystyrene material, Bakelite Corp., New York, Dow Chemical Corp., Midland, Mich., and Monsanto Chemical Co., Plastics Div., Springfield, Mass.; molder, Waterbury Companies, Inc., Waterbury, Conn.* **Cannon**—*Set-up boxes, High Point Paper Box Co., High Point, N. C., and Old Dominion Box Co., Inc., Charlotte, N. C. Folding*



Each plastic inhaler has three precisely-made parts that fit snugly together. Order them plain or lithographed.

NEED SMALL PLASTICS IN BIG VOLUME?

LOOK FOR THIS O-I TRADE MARK

Then take advantage of complete molding facilities ready to serve you *now* at Owens-Illinois.

Good examples of results obtained are the plastic inhalers above. Compression molded on high-speed, automatic precision machines, each one is strong, uniform . . . dependable on the filling line, dependable as a product protector.

You get this top quality, high-speed production at low cost due to careful co-ordination of design with the exactly right molding process by O-I's expert plastics engineers.

If you need small plastics in big volume, contact Owens-Illinois. We're ready and able to serve you *now*.

PLASTICS DIVISION

OWENS-ILLINOIS GLASS COMPANY

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when it's in a wooden chest, box or display case by ROCK. Boxes by ROCK are beautifully designed, sturdily built. Specializing in the design and manufacture of silverware chests, jewelry and display cases for many years has made our name synonymous with fine wood containers.

You will find ROCK containers ideally suitable for your product.

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Manufacturing Company
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"From Standing Timber to Finished Product"

Positive Product Identity ⇨

With printing on glass, plastic, metals

Lithographic labels on containers will not deteriorate, chip, peel, or rub off. Full brilliant color provides permanent product identity. Lithographed containers help develop brand loyalty—tie in with your advertising and point-of-sale efforts. Besides, the reproduction resists chemicals, solvents, water and heat. You can make your label work harder and longer if it is lithographed.

We also do spraying and printing on metallic, glass, or plastic containers and closures.

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boxes, Container Corp. of America, Chicago. Aluminum foil, Reynolds Metals Co., Richmond, Va. **Martex**—*Plastic balls, designers, Walda and James Alexander, New York. Cellulose acetate material (Vuepak) Monsanto Chemical Co., Plastics Div. Fabricator, Design Center, Inc., Flushing, N. Y. Towel dolls, Walda and James Alexander. Pine bough box, designers, Muller-Barringer, New York; set-up box, Old Dominion Box Co. Folding box, Container Corp. of America.* **Barricini** *plastic chest—Alden Plastic Corp., New York; molding, assembling, and finishing, Amos Molded Plastics, Edinburg, Ind.; polystyrene material, Dow Chemical Co., Midland, Mich., and Monsanto Chemical Co., Plastics Div.* **Schrafft** *box—Acetate filament yarn, Celanese Plastics Corp., New York; fabricator of laminate, Facil-Fab, Inc., New York; box maker, F. J. Schleicher Paper Box Co., St. Louis.* **Coronation Diamond** *box—molder, Celluplastic Corp., New York.* **Hanscom**—*Crock, Western Stoneware Co.* **Fitch**—*designer, J. Gordon Lippincott & Co., Inc., New York. Boxes, Dubuque Container Co., Dubuque, Ia.* **Bathasweet**—*Designer, George Reiner, New York; folding box, Wilkata Folding Box Co., Kearney, N. J.* **Gourielli**—*Five O'Clock glass containers, T. C. Wheaton Co., Millville, N. J.; shaker tops, Majestic Metal Specialty, Inc., New York; folding boxes, The Lord Baltimore Press, Baltimore, Md. Victorian glass paper weight, Mc Kee Glass Co., Jeannette, Pa.; folding box, Quartin Specialty Box Co., Brooklyn.*

Kimsul's dealers kit

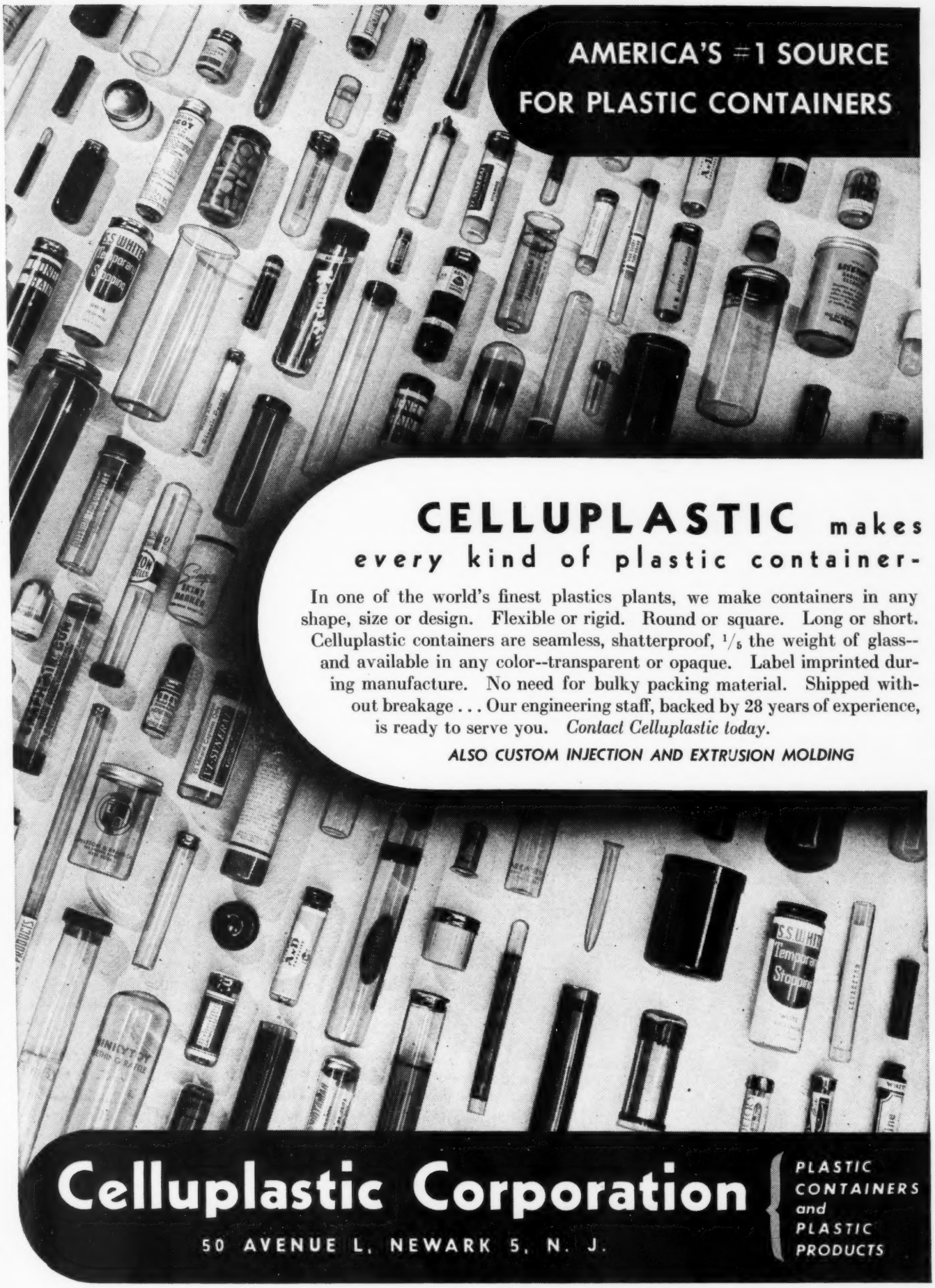
A novel sample kit to announce improvement in both product and package design was used recently to interest dealers and distributors of Kimsul insulation.

A corrugated carton the size of a king-sized cigarette

carton was designed as a combination mailing container and point-of-display kit. To assure dealer interest, a personal letter was enclosed in each kit and beneath the three individually packaged Kimsul samples were useful memo pads printed with promotional copy.

Package design improvement is a new color treatment system to identify the three thicknesses of Kimsul.

CORRECTION: In the article, "Beauty Shop Packages," MODERN PACKAGING, Aug., 1947, p. 117, a statement was made that Halliwell Royal Luster Custom Cream Wave could be promoted as a home wave kit. This was erroneous. This combination package is used exclusively in beauty shops for an electric wave.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FOR PLASTIC CONTAINERS
CELLUPLASTIC makes
every kind of plastic container-
In one of the world's finest plastics plants, we make containers in any shape, size or design. Flexible or rigid. Round or square. Long or short. Celluplastic containers are seamless, shatterproof, 1/5 the weight of glass--and available in any color--transparent or opaque. Label imprinted during manufacture. No need for bulky packing material. Shipped without breakage . . . Our engineering staff, backed by 28 years of experience, is ready to serve you. Contact Celluplastic today.
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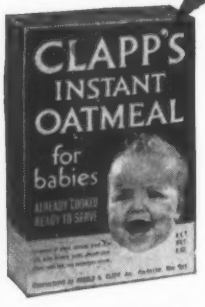
OUR skilled craftsmen know how to produce attention-compelling fine lithography . . . the kind that gives you stand-out displays and packaging, assuring increased sales for your product.

Some of the nation's largest users of color lithography know that at SALE LITHO every individual job is assured all the knowledge and skill we possess to assure perfection.



Displays, Cut-outs, Box Wrappers, Labels, Folders, Inserts, Booklets, Calendars, etc. are created and produced by the Sale Lithograph Company, for nationally known manufacturers and do an effective job throughout the world.

Color Lithographers

Since 1904 Devoted to the Production of Fine Lithography

Service packaging

(*Continued from page 140*) or lowered to meet these conditions.

Thus, the new packaging establishes the standard package as a sales unit and the minimum package for the minimum resale unit. This, it is believed, will mitigate the nuisance of broken-package sales.

A distinctive over-all printed external wrapper has also been developed featuring the combined Behr-Manning "bear and triangle" and the parent Norton Co.'s logotype so that all Behr-Manning materials can be readily identified and distinguished from competitive products at a distance.

Numerous minor changes were made, such as the placing of belt nests in minimum-package cartons instead of banding them. The type face used on product labels has been changed from Goudy old style to a sans serif Gothic type for much stronger legibility.

Thus without resort to the usual "prettying" motives of product repackaging, Behr-Manning's customer-packaging plan brings to its distributors, dealers and consumers a new convenience and economy in the buying, selling, handling and use of coated abrasives—a true devotion of packaging to customer service.

CREDITS: *Folding cartons, Federal Carton Corp., New York; Cohoes Carton Corp. and Lowman Folding Box Corp., Divisions of United Paperboard Co., Inc., New York; Fort Orange Paper Co., Castleton-on-Hudson, N. Y., Folder sleeves and counter cartons, Federal Carton Corp. Chipboard set-up boxes, John Leggett & Son, Inc., Cohoes, N. Y.; Riverside Box Factory, Troy, N. Y., and Albia Box & Paper Co., Troy, N. Y. Corrugated containers, Capital City Container Co., Inc., Albany, N. Y.; Albany Corrugated Container Corp., Cohoes, N. Y., and Container Corp. of America, Chicago. Labels and printed wraps, E. H. Foster & Co., Inc., Cohoes, N. Y., and C. L. Moak Printing Co., Cohoes, N. Y.*

Polystyrene boxes

(*Continued from page 152*) 20% lighter than competitive materials, a double economy is effected. Due to the fact that this is an unplasticized resin, there is no danger of its contaminating foods or other products with which it comes in contact. It is dimensionally stable and will withstand, without deterioration, exposure to sunlight and temperature changes.

Nevertheless, up to now manufacturers of transparent containers have not been able to capitalize on the many advantages of this clear polystyrene sheeting to any extent. The main difficulty encountered has been cementing on a production basis similar to the method employed by users of cellulose acetate and ethyl cellulose sheeting. The polystyrene sheet reacts badly to cement. But the unique drawing process cited above has eliminated cementing and other problems of transparent container manufacture with oriented polystyrene.

Although this method of forming boxes can be adapted to any transparent material, it was particularly developed to utilize the advantages of the econom-

PUT YOUR PRODUCT IN THIS PICTURE!

HERE'S A GALLERY of famous products—a mere few out of the thousands of sales leaders packaged with BAKELITE phenolic and styrene plastics. Adopt these modern packaging materials—get the benefits of superlative protection and sparkling eye-appeal—join the company of distinguished names that enjoy the fastest turnover in America's retail outlets.

BAKELITE plastics for closures and packages come in brilliant and pastel hues to harmonize with every color scheme—and they're transparent, translucent, or opaque. They can be molded in smart standard designs for utmost economy; and the variety of special designs is, of course, unlimited. Your product's name, initials, or trade-mark can be permanently embodied in the molding as a reminder of its identity each time it is used. And, closures and packages of BAKELITE plastics are non-absorbent, dimensionally stable, impervious to most chemicals and acids, and they retain their good looks indefinitely.

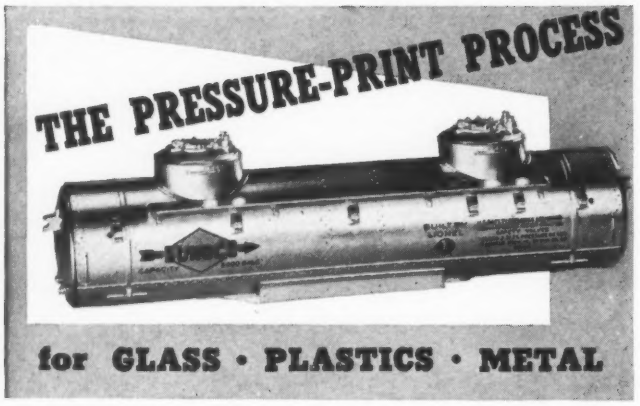
Write Department 61 for detailed information on BAKELITE phenolics, styrenes, and other types of plastics marketed by BAKELITE Corporation for packaging purposes.

TRADE-MARKS

BAKELITE

PLASTICS FOR PACKAGING

BAKELITE CORPORATION UCC *Unit of Union Carbide and Carbon Corporation,* 30 East 42nd Street, New York 17, N.Y.



PRESSURE-PRINT is a special printing method we have developed for reproducing any number of colors on any shape and size of container. Good for glass, plastic or metal.

We can install this process in your plant and teach your operators how to reproduce in perfect registration any number of colors.

Or—if you would like to see how PRESSURE-PRINT will look on your container, we can do the work for you in our plant.

PRESSURE-PRINT process is impervious to oil, alcohol and water. Doesn't rub off, stays brilliant. Investigate PRESSURE-PRINT today.

Multi Color Graph CORP.

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CANADIAN PACKAGING

Have you considered the economy and convenience of shipping your product into Canada in bulk and placing your Canadian packaging in competent, experienced Canadian hands?

We have experience and capacity to render you a complete service ... packaging powders, pastes, liquids, etc. In addition we offer facilities for a complete storage, distribution, invoicing and banking service.

We are equipped to manufacture, if desired, to your specifications or to complete the processing of your concentrates. We can, in effect, operate as your complete Canadian production division.

Your enquiries will be treated promptly and confidently.

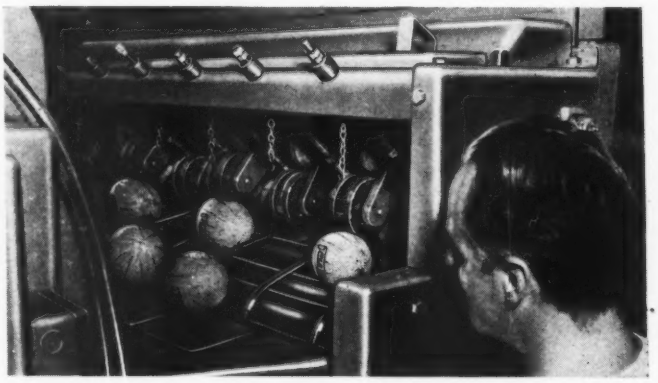
The Howell Warehouses Ltd.
PACKAGING DIVISION
222 Front St. E., Toronto, Canada
Since 1913

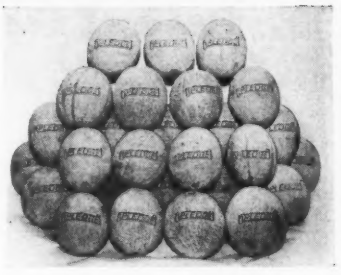
ical polystyrene sheet. Another advantage of this material is that it has greater rigidity, gauge for gauge, than others, making possible the use of a lighter sheet. The greater dimensional stability and low thermal conductivity make possible the easier forming of oriented polystyrene material, so that a container of almost any size or shape can be fabricated. Thicknesses from 0.005 in. to 0.060 in. may be used, thicknesses above 0.020 in. being obtained by laminating several thinner sheets prior to forming. Great care must be exercised in laminating to prevent a loss of orientation from the Polyflex, for if it is released brittleness results.

In addition to the above advantages of oriented polystyrene for boxes, it should be pointed out that such operations as beading, creasing, folding and printing can readily be carried out under properly controlled conditions. In addition to embossing, decoration and trademarking may be accomplished by conventional methods of silk-screen printing.

Branded cantaloupes

Choicer brands of cantaloupes are now appearing in the market counter displays with their brand name proudly stamped on the rind. The identifying marks, applied at the packing house by a new machine of Food Machinery Corp., Riverside, Calif., are printed right into the skin of the fruit. The mark is big and easy





Cantaloupes, one of the most obstinate of fruits to be trademarked, can now be easily branded by the machine shown above. At the right is a group of cantaloupes with their brand names stamped right on rind. Vegetable die is used.

to read on displayed fruit. The waterproof ink is put on to stay and is said not to smear or wash off in the ice-filled refrigerator car during the trip to market. Although not many people eat the cantaloupe rind, the ink is edible, complying with the Pure Food Law.

Produce managers who have seen the stamped fruit were pleased with the idea, since most of their customers buy by trade name.

Design AND CRAFTSMANSHIP

Design and craftsmanship are the two inseparable influences behind smart Foxon labels.

These influences are reflections of our high designing and production standards and are the reasons why Foxon Labels can add selling appeal, charm and dignity to your product.

Whether you are interested in an embossed foil label, seal, tag, box wrap, or dealer display, we welcome your next assignment.

Foxon

Designer CRAFTSMEN

AMERICA'S FINEST FOIL PRINTERS

THE FOXON COMPANY

MAIN OFFICE AND PLANT • 235 W. PARK STREET, PROVIDENCE, R. I.

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SET-UPS...

SALES UP

Day by day,

the popularity curve of the set-up box is rising far above that of all other competitive packages. Attractively designed, the set-up box commands more attention at point of sale. Rigid and durable, it assures your product greater protection from your plant to the consumer's home. Then too, its compactness facilitates handling, shipping and storage. With a versatility not possessed by any other package, this container is economical too, offering you more for your money. Make the set-up box an important part of your plans for '48 and watch *your* sales curve rise.

NATIONAL PAPER BOX MANUFACTURERS Association

AND COOPERATING SUPPLIERS

Liberty Trust Building, Philadelphia 7, Penn.

FOR INFORMATION OR SERVICE • CONSULT YOUR NEAREST SET-UP BOX MANUFACTURER

STAPLING FOR BETTER PACKAGING

Wire Fastening Offers Important Sales Advantages

Making the most of a package's sales-stimulating possibilities involves a careful consideration of the method by which the package is fastened. Numerous instances are known in which a change in packaging and fastening methods has brought about worthwhile sales advantages.

BETTER DISPLAY

A New York hardware manufacturer, for example, formerly marketed hinges in individual boxes. The prospective buyer could not even see the hinges until he first secured a clerk to take the boxes from a shelf behind the counter. When the manufacturer changed to stapling the hinges to counter display cards, sales increased and the clerk's "selling time" decreased.

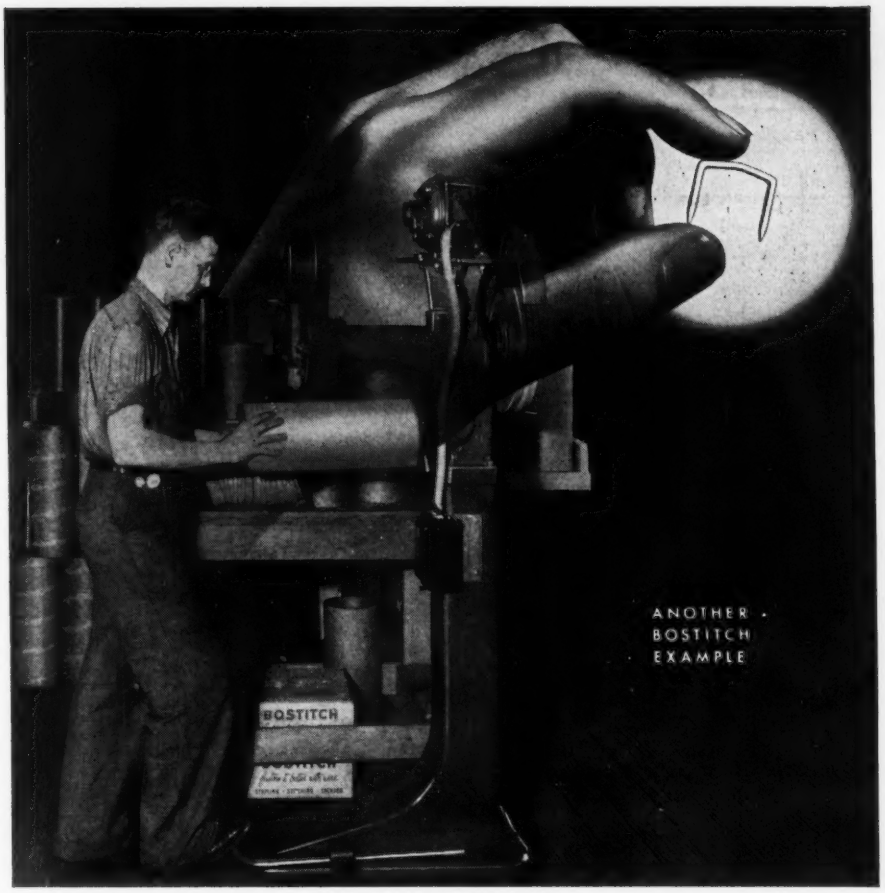
A Washington, D. C., commissary found that a 30% sales increase followed when it changed to Bostitching its sandwich packs. Stapling resulted in a neater, more tempting package than the former method . . . and proved 20–25% faster.

IMPULSE BUYING

Jewelry manufacturers have had equally interesting and profitable results. Stapling watch bracelets, novelties and costume jewelry to display cards has stepped up impulse buying . . . besides providing a more economical method of packaging. A recent survey shows that when small hardware, cosmetic and miscellaneous household items were taken from department store counter bins and stapled to individual merchandising cards, impulse sales jumped while damage and pilfering decreased.

INCREASING USE OF STAPLES

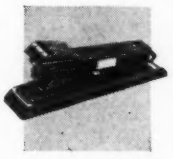
Examples like these are common. Every day, more manufacturers discover that their products can be more effectively and more efficiently packaged by Bostitch stapling methods. And Bostitch, through its staff of field representatives—the largest in the world—has helped scores of firms to better packaging. There are over 800 models of Bostitch wire fastening machines from which to select those that best fit your needs.



$6,250 a Year Saved Stitching Metal to Fibre!

This household appliance maker, by steel-stitching metal discs inside of cylinders instead of pre-punching holes and riveting the parts together, saved $6,250 per year.

From other Bostitch users come such reports as: reducing cost of sealing metal air duct from 41¢ to 19¢; upping kitchen cabinet drawer production from 800 to 1200 units in ⅛ as many man-hours; tacking burlap and heavy paper around shrubbery crates 6 times faster.



From tiny desk stapler to big metal stitchers

Your fastening job may involve other combinations of metal . . . cloth . . . paper or wood, or such materials as plastics or leather. Investigation may prove that one of the 800 Bostitch machines can do it better and faster with wire.

250 field men in 91 key cities, backed by skilled research engineers and 50 years' Bostitch experience, apply the right machine to each job.

Write for more facts about selected models from the world's most complete line of stitchers, staplers, hammers, tackers, etc. Mail the coupon today!

BOSTITCH
fastens it better AND FASTER *with wire*
ALL TYPES OF STAPLES APPLIED BY MACHINES
ALL TYPES OF MACHINES FOR APPLYING STAPLES

Bostitch, 514 Mechanic Street, Westerly, R. I.
(or Bostitch-Canada, Ltd., Montreal).

Please send literature checked:
B188, showing representative Bostitch time-saving tools ☐
Specific information relating to my fastening requirements ☐

Name.....

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All classified advertisements payable in advance of publication. Rates: $5.00 up to sixty words; enclosed in border, $10.00 per inch.

Classified Advertisements

Publisher reserves the right to accept, reject or censor a classified copy.

FOR SALE—Doig Universal four track nailing machine, fitted to drive four 1¼" nails at adjustable 22" spread, uses 1 h.p. motor, in A-1 operating condition. Can be seen in operation at Stamford, Conn. Box 584, Modern Packaging.

WANTED—New or Used—Package Machinery Wrapping Machines Model F-2 sheet-feed. For own use. Box 574, Modern Packaging.

FOR SALE: Pneumatic Scale combination automatic packaging machines. 60 to 90 cartons a minute. Handles free flowing or dry materials. Opens carton, bottom seals, volume fills, top seals, glues flaps and ejects complete cartons. All safeties. No carton—no feed, no fill; no material—no fill; no carton—no glue. Practically new. Box 561, Modern Packaging.

WANTED—New Era Multicolor web-feed Printing Presses, size 9 x 12' and 6 x 6'. For own use. Box 575, Modern Packaging.

WANTED—Sample Maker for large mid-west folding carton company. Excellent opportunity. Box 582, Modern Packaging.

SALES REPRESENTATIVE 10 years' experience selling bulk containers to industry in Metropolitan New York, Philadelphia and New England desires line of rigid acetate boxes and containers, also flexible packaging and coated papers. Will handle with other non-competitive packaging products on commission basis. Box 583, Modern Packaging.

SALES MANAGER—We can offer an excellent proposition to a man qualified to expand the sale of waxed cartons and jobber items. All replies will be kept confidential. Box 580, Modern Packaging.

FOR SALE—Hobbs 45" Double Scoring Machine. Meyer-Stark Mfg. Co., 2900 Doris, Detroit 6, Michigan.

FOR SALE—2 Used #8 Morgan Single Row Nailing Machines Portable on wheels each with 3 H.P. A.C. Motor. Penick & Ford, Ltd., Inc., Purchasing Dept., Cedar Rapids, Iowa.

SALES EXECUTIVE—To head specialties division of large carton manufacturer. Exceptional opportunity for an aggressive man together with an attractive proposition which will provide substantial earnings. All replies held in strict confidence. Box 581, Modern Packaging.

FOR SALE: Water vapor permeability test cabinet for determining the water vapor transmission of sheet materials at high temperature and humidity. Equipment is for making tests according to Tappi standards and consists of a cylindrical cabinet with controls, a desiccator, 12 aluminum test dishes and a brass templet for making a wax seal. Price $250.00. Box 585, Modern Packaging.

CHEMIST (VETERAN) available shortly. Age 34 years, married. Background includes formulating resinous coatings and adhesives, product development, wide experience in roller-coating and printing operations, film castings, laminations to fabrics, supervision of technical operations, production supervision. Prefer to locate within 85 mile radius of N. Y. C. Salary $85. Box 586, Modern Packaging.

MANUFACTURERS' REPRESENTATIVE now representing prominent packaging machinery manufacturer in Mid-Western States, including Chicago Area, wants additional items to complete packaging equipment line. Aggressive and adequate sales representation assured. Box 589, Modern Packaging.

YOUNG MAN with folding carton experience as sales service clerk for exceptional opportunity as junior executive with nationally recognized manufacturer. Box 588, Modern Packaging.

1—CLIPPER Automatic Bag Maker with several hundred dollars worth of parts, $675.00 complete. 1 #4 Simplex Automatic Bag Maker with Electric Eye, $250.00. Both machines now operating. Box 594, Modern Packaging.

HELP WANTED—Male Contact-Sales in Graphic Arts Field. Sales personality, technical aptitude essential. College education, printing field experience desirable. Excellent opportunity for able young man. Starting salary depends on qualifications. Box 596, Modern Packaging.

CURTISS CEMENTING Press for Acetate Boxes.

A rugged, rapid, simple machine, developed to defeat cementing troubles and size variation at the source.

* Effortless—No operator fatigue
* Self-Aligning—Accurate for life
* Requires no source of power
* End Capacity 8" x 12" on a 24" box
* Occupies one sq. foot of bench space
* Tested and Proven in production

Price delivered, $50.00. Special capacities to order. Quantity discounts. Write for Bulletin A.

John S. Curtiss Box 345 Belmont, Calif.

NEW YORK CITY sales representative wanted by F. E. Mason & Sons, Batavia, N. Y., makers of America's finest embossed seals and labels. We wish to secure the services of an experienced, top flight salesman with a record of success in allied lines—on a straight commission basis. Advise experience and present connections immediately.

CELLULOSE BANDS—2,500,000 cellulose bands 28 mm dia. x 15 mm long, various colors. Priced for quick sale. Pebble Springs Distilling Co., State & Water Streets, Peoria, Illinois.

MECHANICAL ENGINEER—Age 45 years. 15 years' experience in the manufacturing and sale of selling packaging machinery, 8 years with leading packaging machine manufacturer in Germany as development and patent engineer desires responsible position with progressive firm. Box 591, Modern Packaging.

WANTED: New or Used—Miller High Speed Printing Presses 13" x 20" with Swing-Back Feeders. We are not dealers. We want these presses for our own use, and will pay highest cash prices. Box 590, Modern Packaging.

WANTED—Production Manager for integrated Midwest Folding Carton plant, to take over such duties as ordering board, making layouts, supervising production records, etc. Such previous experience desired, but not essential for young, aggressive man with right back-ground. Box 592, Modern Packaging.

EXTREMELY ATTRACTIVE position for salesman with folding carton experience, established protected territory. Highest qualifications necessary. United Paperboard Company, 285 Madison Avenue, N.Y.C.

1 PACKOMATIC Automatic Case Sealer slightly used, 8" compression unit, $2750.00. Box 593, Modern Packaging.

FOR SALE—9 Heat Sealing Machines—made by Heat Seal It Co. 16" jaw Pacer Model. Latest type motor driven, thermostatically controlled. New—never used. To be used in heat sealing cellophane laminated papers—cloth—foils, etc. Metropolitan Plastic Products Co., 504 West Broadway, New York 12, N. Y.

APPROXIMATELY 5000# of Heat Seal label paper in 8¾" rolls—our cost 32½¢ per pound—will sell less 25%. Box 595, Modern Packaging.

FOR SALE: New Triangle model SHA automatic soap and cleaner packaging machine. Complete with automatic weigher, model SA top and bottom carton sealer, motors, belts, etc. Machine just received has never been uncrated. Will sell at invoice price. Freight allowance to Chicago. Lystad & Redick, Inc., Grand Forks, N. Dak.

WANTED—ASSISTANT SUPERINTENDENT, for integrated Folding Carton plant in Midwest, to handle floor work, supervising production and quality control. Box 587, Modern Packaging.

The *NEW* RODGERS FILLER

14 Machines sold in one week
for filling Plastic Balloons
in Collapsible tubes.

This is another outstanding example of the versatility of the Rodgers filler.

Cut down costly production time with high speed filling. The new Rodgers Filler accurately fills all types of rigid or flexible containers with Plastic Balloons powder or paste materials.

AUTOMATIC OPERATING FEATURES—
Both package fill time and transfer time are automatically controlled. Settings to maintain these intervals are independently adjusted by 2 dials. No foot pedal is needed.

Adjustment from $^1/_3$ oz. to 10 lbs. in just a few minutes.

SMOOTH OPERATION . . . no slippage assured by friction-free, over-running clutch.

LOW MAINTENANCE COSTS—All mechanical units are self-contained . . . sealed ball-bearings eliminate clogging.

Send us a sample of your product. After a practical run on the Rodgers Filler we will give you specific information.

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EXPOSITION
CHEMICAL
INDUSTRIES
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New York, N. Y.
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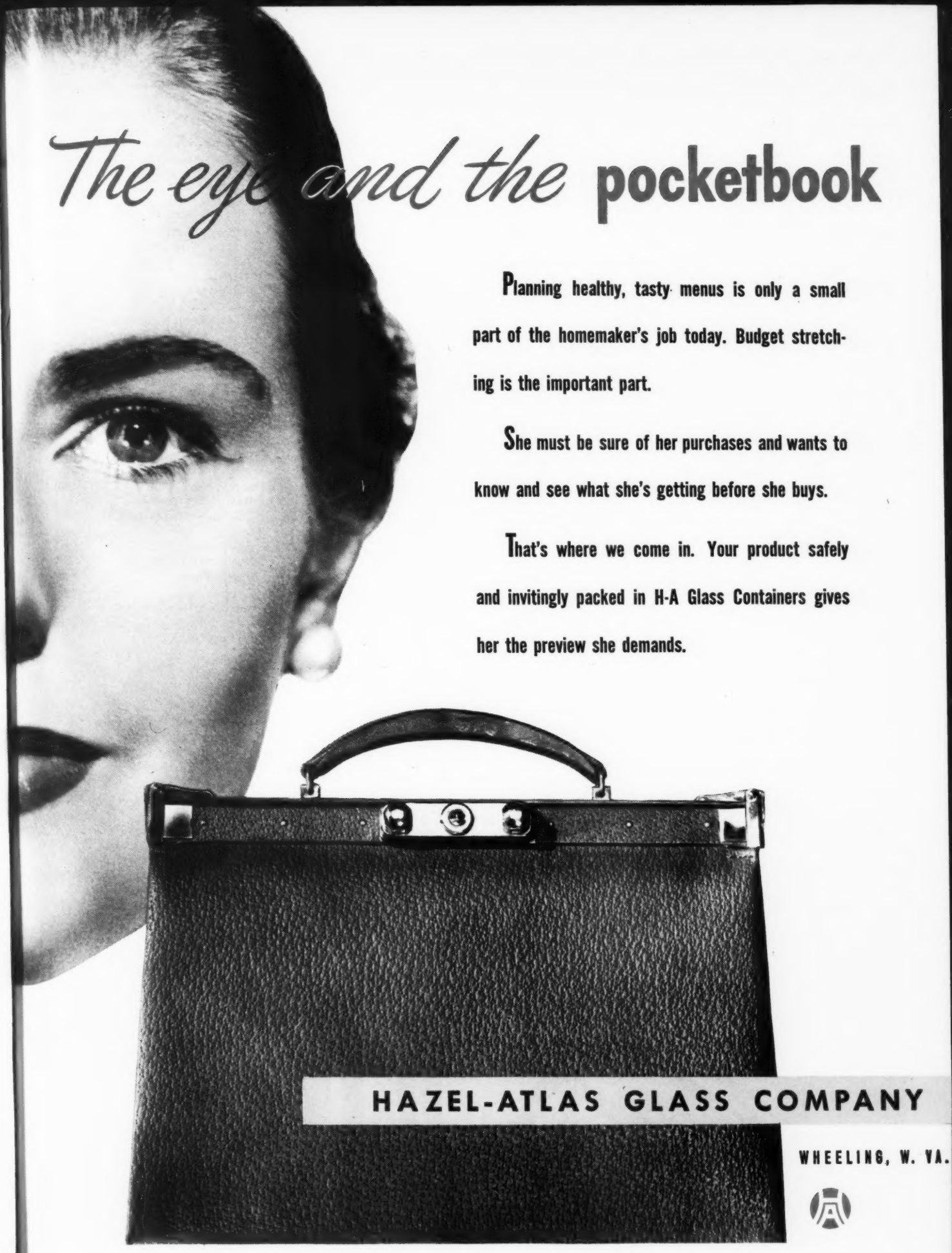
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Planning healthy, tasty menus is only a small part of the homemaker's job today. Budget stretching is the important part.
She must be sure of her purchases and wants to know and see what she's getting before she buys.
That's where we come in. Your product safely and invitingly packed in H-A Glass Containers gives her the preview she demands.
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Modern PACKAGING A BRESKIN PUBLICATION

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Who?

WHO'LL move into the empty space in this picture? It's waiting for some up-and-coming company that wants the best tubes money can buy.

We're already making tubes for some of the best-known names in all business. You see a few on this page. But we're still eager to take on some promising young product (or maybe products) and give them the good engineering, beautiful reproduction and precise uniformity that make Sun Tubes outstanding.

If you're interested, call us. Our main office is at 181 Long Avenue, Hillside, New Jersey. Or if it's handier, call any one of the men listed below.

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LOS ANGELES 27, CALIF., R. G. F. Byington, 1260 North Western Avenue
ST. LOUIS 1, MO., M. P. Yates, Arcade Building
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CINCINNATI 8, OHIO, Ralph H. Auch, 3449 Custer Road

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Plastic Artisans Inc.,
White Plains, New York.

show business is good business...

show what you're selling in VUEPAK

For eye-catching, salesmaking displays—as well as individual "showcase" packages—look to transparent, rigid Vuepak.

This versatile Monsanto packaging material fabricates readily and economically by the fastest mass-production methods. It combines with a wide variety of other materials.
With a touch of imagination, you can have a display every bit as attractive and buy-appealing as this one by John Fredericks.

And you can be sure of a warm retailer reception for displays of Monsanto Vuepak. They earn spotlight counter positions because they are light weight, easy to handle, and protect and preserve their contents.

When it's sales you're after, through a package or a display, get the facts about Vuepak first. See your box supplier . . . or write direct:
MONSANTO CHEMICAL COMPANY, Plastics Division, Springfield 2, Mass.
In Canada, Monsanto (Canada) Limited, Montreal.

VUEPAK TRANSPARENT PACKAGING MATERIAL

Vuepak: Reg. U. S. Pat. Off.

MONSANTO
CHEMICALS AND PLASTICS

SERVING INDUSTRY . . . WHICH SERVES MANKIND

HERE'S A PACKAGE

THAT'S PART OF THE PRODUCT

This bright display carton and toy stove combination was conceived, designed and produced by Michigan Carton Company for Krest, Inc. of Detroit. Brilliant colors, attractive design and the clever use of the carton as a play stove combined with a sturdy toy produce high value for the buyer and, consequently, excellent sales results for Krest.

THIS smart package idea by Michigan Carton shows how a carton can add greatly to the value of the product without adding appreciably to the cost. Closed, the carton provides protection for the merchandise. Opened, it makes an eye-catching, sales creating display. Turned upside down, it becomes a toy stove made for use with the skillet and egg-turner that it contains. Kids love 'em and their parents are buying them by the thousand.

With facilities for producing cartons by the hundred thousand or by the many millions, Michigan Carton offers you this kind of highly creative planning and thinking for your package — the kind of thinking that puts more sell in your product.

Why not talk to Michigan Carton about your package? Deliveries are slower than we would like to have them but we are always glad to offer prompt, courteous, helpful service on your future problems.

PACKAGING ENGINEERS FOR THE NATION'S TOP PRODUCTS

Michigan CARTON CO.
BATTLE CREEK, MICHIGAN

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of an

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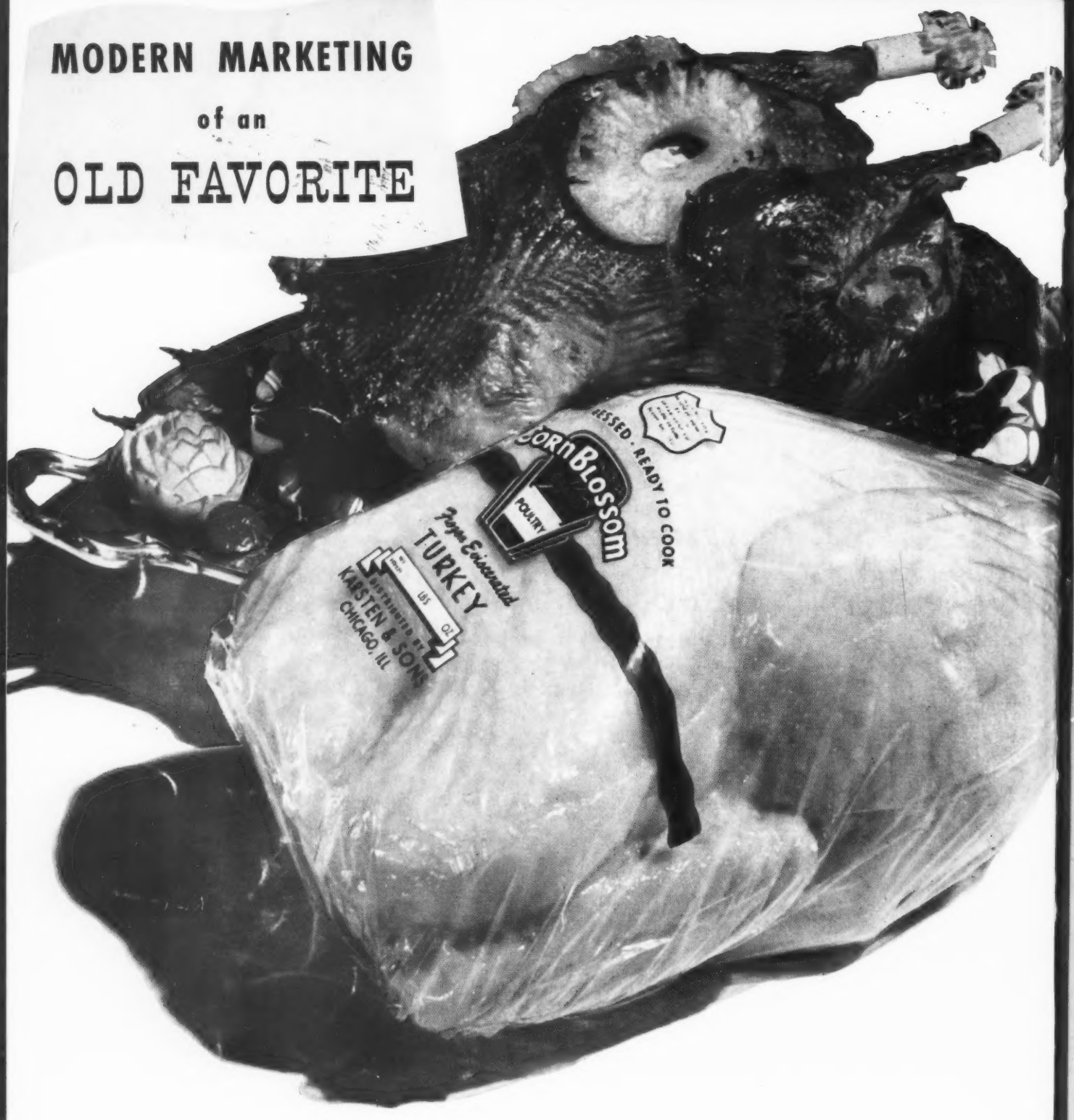

Turkey as it is marketed today . . . completely cleaned, eviscerated, frozen and ready for the oven . . . requires a package which will assure adequate protection through the many handlings from packer to consumer.

Shellmar provides all the packaging essentials for Karsten & Sons' Clover Blossom poultry with this durable, efficient *Pliofilm pouch, printed to give absolute brand identification and attractive display.

Shellmar will welcome the opportunity to develop a *finer* package for *your* product.

*T. M. Reg. U. S. P. & R. Co.

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